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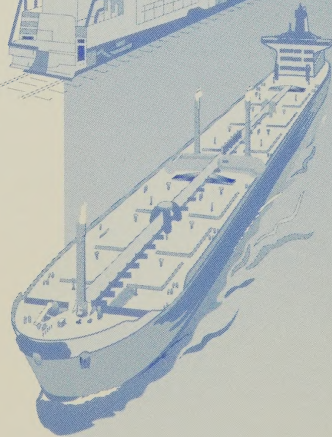
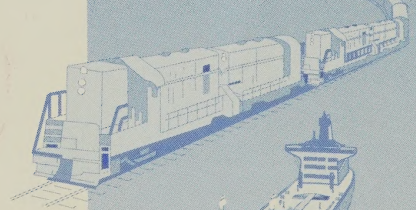
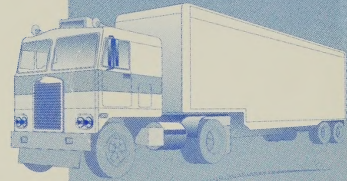
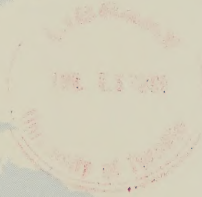
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TRANSPORTATION TRENDS & ISSUES



Canada

1994 ANNUAL REVIEW

ATTENTION

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Annual Review of the National Transportation Agency of Canada 1994



Annual Review
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1994

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SUMMARY

The year 1994 saw a remarkable turnaround in the Canadian economy although it was unevenly spread across sectors and regions. The transport sector benefited from increased traffic. The recession that had lingered into 1993 was showing signs of abatement by the end of that year and, during 1994, was overtaken by a surge in Canadian economic activity. Canadian trade fuelled the growth and was paced by exports of both manufactured products and bulk commodities.

Canada's gross domestic product grew by 4.5 per cent, the highest since 1988. Growth was led by merchandise exports, which registered an increase of 15.1 per cent over 1993. The robust United States economy rose four per cent, its largest growth since 1984. This growth in the U.S., combined with a low Canadian dollar, which traded in the 73 cent area, accounts for a large part of the stimulus to Canadian exports.

Both raw materials and manufactured goods participated in Canada's export drive in 1994. Canada's factories now export half the goods they produce, up from one-third in 1989. This exceptional economic performance was shared with the transport sector. All modes carried higher traffic volumes and earned larger revenues than in 1993.

The retrenchment, rationalization and restructuring that characterized the transport sector in the early 90s gave way to growth and profits in 1994.

Airline traffic increased as an expanding economy stimulated both business and leisure travel. Airlines recalled employees from lay-off status and added aircraft to service existing traffic and new routes. Larger revenues and yields produced improved bottom-line performance.

Tonnage carried by Canadian railways was up 13 per cent over the year before. The fastest growing traffic sector, at 26 per cent, was intermodal, reflecting the surge in manufacturing shipments. Among other traffic to show substantial growth were grains, up 24 per cent, iron ore, up 20 per cent, and potash, up 25 per cent.

The railways continued their rationalization efforts but were faced with the challenge of carrying significantly more freight traffic. This surge caught them short of equipment and by year-end both CN and CP had placed large orders for new locomotives. Both railways saw increased profits during 1994.

Trucking firms carried more traffic, continuing the growth that had started in 1993, with North-South traffic exhibiting continued strength. Profitability increased for the trucking sector as operating ratios showed improvement.

The recovering economy extended to the Great Lakes and the Seaway which experienced increased movements of iron ore, iron and steel and grain. Higher imports and exports produced growth in international marine traffic as well.

Employment in the transport sector grew by 3,000 jobs in 1994. The air, marine and trucking sectors added employees while the number of people working for the railways continued to decline.

Shippers expressed an overall level of satisfaction with the service they received from carriers in 1994. Shippers and carriers ran leaner operations after the years of recession. Shippers continued to experience relatively stable freight rates and, where they occurred, increases were mostly in line with the rate of inflation.

INTRODUCTION

Mandate

The *National Transportation Act, 1987 (NTA, 1987)* required that the National Transportation Agency (Agency) prepare four Annual Reviews on the outcome of the revised transportation legislation in Canada for the period 1988-1991. The completion of these Reviews was followed by a comprehensive review of the *NTA, 1987* by the National Transportation Act Review Commission. Before publication of the 1991 Annual Review, the Minister of Transport requested that the Agency continue the review process for at least two years pending the outcome of the Commission's comprehensive review. One recommendation of the Review Commission was to continue the Annual Review, keeping in mind the need to constantly reflect current concerns of the stakeholders. In March, 1994, the Minister of Transport sent a letter to the Agency further requesting that the Annual Review be continued. Subsequent consultations were also held with Transport Canada's Policy and Coordination group.

Changes in 1994 Issue

The Annual Review has changed in format, style and content over the years. However, it continues to rely heavily on its survey program, as this remains a unique source of information in Canada for direct assessment of users' experiences with the carriers and provisions of the Act. This year, the key results of the Agency's survey program are incorporated into one chapter entitled "Users' Perspective" with

more detailed survey data in the Appendices.

The 1994 report returns to a modal format for the major sectors of the transportation industry namely, air, rail, truck and marine, reflecting the general readership preference as expressed in reader response cards and other correspondence. It covers information on financial and operational performance, regulatory activities, service initiatives and major issues for each mode. A new chapter presents information on users' perspectives and another chapter entitled "Canadian Transportation" reports on trade patterns, logistics, supply chains and Canadian transportation trends. In addition, more detailed background data for each mode, including safety, employment and subsidy information, is located in the Appendices section of the Review. The 1994 Annual Review remains a reference document, which can also serve as a guide to industry and government decision-makers.

Acknowledgements

The Agency is extremely grateful for the cooperation and continued assistance of all who contributed valuable information used in the 1994 Annual Review: shippers and their associations who continue to respond to the Shippers Survey and provide unique information; railways, airlines, trucking companies, shipping conferences, northern marine operators and other carriers who provide the Agency with detailed data; commercial travellers and their associations, port terminal

operators, freight forwarders and their associations who continue to respond to the Agency's survey program; banks and other financial institutions who provide financial information and analysis; and territorial, provincial and other federal government departments, agencies and boards for their significant data contributions.

CANADIAN TRANSPORTATION



Highlights of 1994

Canadian Firms Gain Ground in International Markets

Canada achieved substantial trade growth in North American, Far East and European markets in 1994.

Success in Competitive Markets Depends on Efficient Supply Chains

Efficient customer response demands optimum performance of all logistics activities in Canadian supply chains.

Canadian Transportation Evolving into Integrated Multi-modal Services

Changes are occurring not only within modes, but in the linkages between modes and in the way modes are combined.

CANADIAN MARKETS AND TRADE PATTERNS

Canada's international trade set a new record of almost \$430 billion in 1994, with imports and exports reaching all-time highs. Trade with the U.S., which represents more than three quarters of the total, surged by 24 per cent over the year, largely due to increasing shipments of motor vehicles, parts and accessories. There were also substantial increases in Canadian trade with Mexico, China, Korea, Germany and Italy.

Figure 2.1
Canada's International Trade, 1994 (\$ millions)

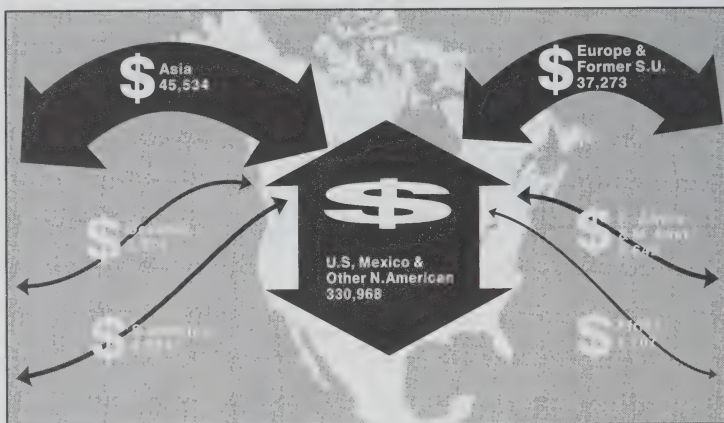


Table 2.1
Shifting Markets for Canadian Trade

Exports (\$ millions)				Imports (\$ millions)			
Rising	1993	1994	Change	Rising	1993	1994	Change
U.S.	145,557	185,217	27%	U.S.	113,602	136,624	20%
China	1,678	2,292	37%	Mexico	3,594	4,464	24%
Korea	1,712	2,191	28%	Germany	3,504	4,385	25%
Belgium	912	1,336	46%	China	3,088	3,853	25%
Italy	952	1,309	38%	Italy	1,934	2,585	34%
Hong Kong	760	1,163	53%	Norway	1,026	1,661	62%
Mexico	817	1,048	28%	Malaysia	870	1,214	39%
Brazil	767	972	27%	Singapore	797	1,152	45%
Falling				Falling			
Russia	453	189	-58%	Russia	432	362	-16%
Cuba	139	115	-17%	Iran	239	117	-51%
Morocco	93	76	-19%	Morocco	68	50	-27%
Libya	90	66	-26%	Egypt	93	15	-84%
Poland	86	60	-30%				
Modest Change				Modest Change			
Japan	8,459	9,652	14%	Japan	10,690	11,343	6%
U.K.	2,925	3,269	12%	U.K.	4,429	4,990	13%
Germany	2,489	2,278	-8%	Taiwan	2,619	2,780	6%
France	1,284	1,361	6%	France	2,260	2,579	14%
Netherlands	1,354	1,218	-10%	Korea	2,196	2,504	14%

Source: Statistics Canada

Table 2.2
Shifts in Import Commodities (\$ millions)

Rising	1993	1994	Change
Coffee	289	559	93%
Flat-rolled iron	779	1,364	75%
Machine tools	952	1,643	73%
Bulldozers, graders, excavators	787	1,357	72%
Copper & copper products	581	849	46%
Electronic integrated circuits	4,156	5,771	39%
Falling			
Soya beans & soya bean oil	87	16	-82%
Electrical energy	85	43	-50%
Military weapons, bombs, grenades	256	150	-42%
Gold	678	430	-37%
Accounting machines, cash registers	143	110	-23%
Modest Change			
Motor vehicles, parts, accessories	32,094	38,338	19%
Internal combustion engines	6,114	7,315	20%
Finished paper products	4,429	4,990	13%
Petroleum oils	5,814	6,047	4%
Computers	5,423	6,423	18%
Clothing, all kinds	2,597	2,796	8%
Air conditioners, refrigerators, freezers, dishwashers	1,827	2,218	21%

Source: Statistics Canada

On the other hand, trading levels dropped with Russia and Iran.

Commodity shifts featured dramatic increases in imports of coffee, iron and heavy construction equipment, as well as exports of canola and railway locomotives. The single biggest drop was in the value of exported tobacco products.

CANADIAN SUPPLY CHAINS AND LOGISTICS

Large-scale international agreements such as GATT and NAFTA have reduced barriers to investment and trade, opening up markets throughout the globe to new levels of competition. Transplanting of production facilities and global sourcing of materials and components have introduced more complex logistics requirements. A new market-driven business environment has emerged where competition is based on efficient

response to the customer. Speed-to-market and a rapid order-to-cash cycle, i.e., the elapsed time from initial order placement by the customer to delivery of the goods and receipt of payment, are fundamental to success. At the same time, high standards must be maintained in order accuracy, shipment tracing, and damage-free handling. With Canada's expansive geography and orientation to widespread import and export markets, this has placed increasing pressures on Canadian shippers.

The ability of Canadian producers and suppliers to compete in domestic, North American, and offshore markets is often determined by the efficiency of logistics in their supply chains. Operations such as order assembly, packing, crating, warehousing, loading/unloading, transportation, documentation, communication, customs clearance, and shipment tracking are not only critical to efficient customer response, but represent one of the largest controllable components in the delivered cost of Canadian products. Transportation costs alone can amount to 45 per cent of the price of exported primary products, and range up to 17 per cent for exported manufactured goods. As a result, there is a great deal of effort currently directed toward the enhancement of productivity in every aspect of logistics services — particularly in transportation.

It is clear from the Agency's Shippers Survey that many Canadian shippers are willing to pay for higher quality service and additional value-added transportation features. Companies will also spend more on transportation to achieve benefits in

Table 2.3
Shifts in Export Commodities (\$ millions)

Rising	1993	1994	Change
Canola seeds, canola oil	914	1,765	93%
Railway locomotives & parts	621	1,009	62%
Electric energy	857	1,311	53%
Lobster, crab, shrimp	594	885	49%
Chemical wood pulp	4,091	5,910	44%
Potash fertilizers	1,200	1,631	36%
Falling			
Tobacco, tobacco products	815	197	-76%
Nuclear reactors, fuel elements	60	20	-67%
Movies, films	127	54	-58%
Oscilloscopes, spectrum analyzers	180	112	-38%
Explosives & propellant powders	76	52	-32%
Modest Change			
Motor vehicles, parts, accessories	45,101	54,594	21%
Petroleum oils & gases	16,542	18,128	10%
Lumber, plywood, particle board	10,908	13,288	22%
Iron, steel, copper, nickel, aluminum, lead, zinc	10,501	12,452	19%
Newsprint, paper, paperboard	8,291	8,919	8%
Wheat	2,832	3,513	24%
Gold	2,950	3,505	19%
Aircraft & parts	2,561	2,837	11%

Source: Statistics Canada

Canadian shippers are willing to spend more on transportation to achieve benefits in other areas.

other areas; for example, more frequent and "just-in-time" deliveries can reduce the required inventory levels for both supplier and customer. Faster transportation frees capital tied up in the delivery phase by speeding up the collection of receivables. Increased reliability and damage-free handling are

critical marketing factors in maintaining customer loyalty.

COMPETITION EVOLUTION OF CANADIAN TRANSPORTATION

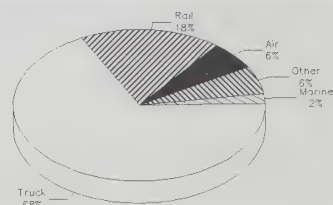
The new business environment has led to enhanced productivity throughout Canada's transportation industry in terms of lower costs and increased service levels, made possible through changes to organizations, operations, and

technology. The changes have occurred not only within individual modes, but also in the linkages between modes and in the way trip segments are combined in multi-modal shipments.

Individual modes

All modes have undergone some restructuring of transportation operations to reduce costs and tighten controls. This was accompanied by large staff reductions by airlines and railways together with attempts to boost productivity throughout the industry. Carriers have implemented fleet commonality programs to simplify maintenance and improve equipment utilization. There has also been considerable investment in Electronic Data Interchange (EDI), an area which many believe offers the greatest potential for improved productivity.

Figure 2.2
Canada's North American Trade
by Mode



Source: Statistics Canada

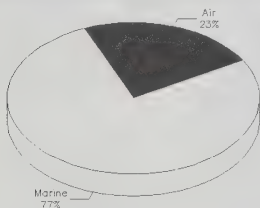
In the rail mode, initiatives such as double-stack container trains and tunnels at Windsor and Sarnia have been given high profile. Other initiatives include more powerful locomotives, higher-capacity cars and containers, and advanced train-control systems.

Trucking companies have adopted new network designs with break-bulk points, and introduced more fuel-efficient engine technology, longer trailers, and satellite communications to monitor fleets.

Productivity enhancements have occurred within modes, in the linkages between modes and in the ways modal segments are combined.

Marine carriers have introduced jumbo container ships with capacities in the 5,000 TEU (twenty foot equivalent unit) range to obtain lower unit costs. They have also established an extensive web of vessel-sharing agreements to extend their network reach while boosting capacity utilization.

Figure 2.3
Canada's Offshore Trade by Mode



Source: Statistics Canada

The airline industry is an acknowledged leader in the development of sophisticated computer applications to optimize operations. In the mid-eighties, the major air carriers re-aligned their networks to hub-and-spoke operations and invested billions of

dollars in new aircraft types that generate cost savings from fuel efficiency and reduced crew requirements.

Linkages between modes

Initiatives to develop more efficient linkages between modes are evident at most large ports, including high-throughput bulk handling facilities such as Roberts Bank at Vancouver, self-unloading and roll-on/roll-off vessel technology, specialized intermodal terminals, and state-of-the-art cargo-handling equipment. The railways are working with innovative intermodal systems such as CP's Iron Highway and CN's ECORAIL. On a structural level, mergers and alliances such as CN-Kleysen Transport, CN-J.B. Hunt, CP-N. Yanke Transfer, and CP-Orient Overseas Container Line promote the development of seamless multi-modal services.

Combinations of modes

Variations on modal combinations are evolving to take advantage of new modal efficiencies such as double-stack container trains, or in response to temporary situations such as backhaul opportunities or equipment shortages. Other factors influencing the development of new multi-modal strategies are congested infrastructure points, customs delays and transshipment requirements.

USERS' PERSPECTIVES

Highlights of 1994

SHIPPERS SURVEY

General Information

The survey was completed by 561 shippers in all parts of Canada and they spent about \$10 billion on transportation.

Most of the survey respondents shipped higher volumes of traffic in 1994 than in 1993.

Shippers reported an average freight rate increase of 1.5 per cent; this varied to some extent by mode and market.

Rail Transport

Close to one-third of respondents used rail transport in 1994.

More than 80 per cent of shippers who spent more than \$1 million on rail transport had traffic interswitched by railways in 1994.

These large shippers felt confidential contracts were the most important factor in getting competitive rail services.

On average, shippers said their rail rates were 1.1 per cent higher than in 1993.

Shippers were generally more satisfied with rail intermodal service than rail carload service, which suffered from equipment shortages at times.

Trucking

Some 80 per cent of shippers reported using trucking services in 1994.

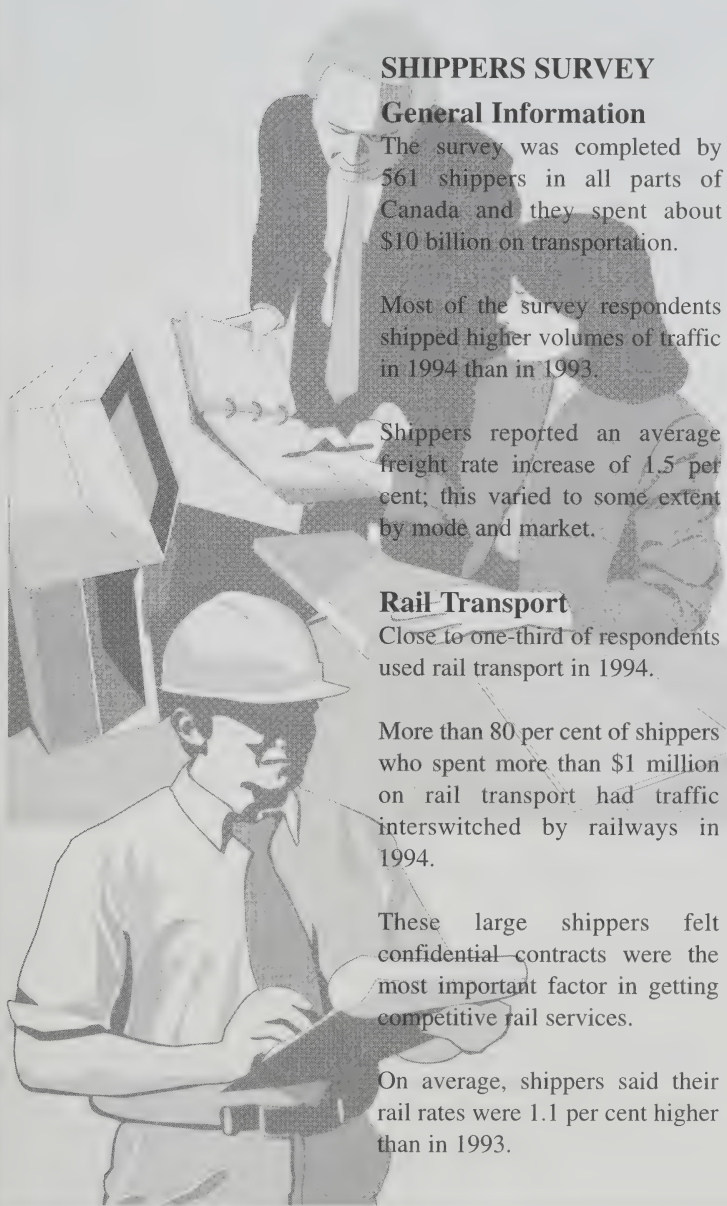
For truckload shipments to the U.S. and Mexico, more shippers used Canadian companies than U.S. companies.

Although generally satisfied with service, shippers were concerned about equipment shortages in truckload markets.

Shippers said their prices for trucking services increased an average of 1.3 per cent over 1993.

Air Cargo

Shippers reported average air cargo rate increases of about two per cent; less than one-quarter of shippers with confidential contracts reported rate increases in 1994.



Marine Transport

Among shippers of containerized goods, more than 90 per cent were satisfied with all service factors except prices/rates and frequency of sailings.

Shippers using marine services experienced average rate increases of less than two per cent in 1994. In the Canada-U.S. market, the average was less than one per cent.

NORTHERN MARINE RESUPPLY USERS SURVEY

After prices/rates, users of northern marine resupply services are most concerned with on-time performance, loss and damage/payment of claims and carrier flexibility.

FREIGHT FORWARDERS SURVEY

Prices/rates remain the most important factor in forwarders' selection of marine shipping lines.

Almost all respondents routed some marine shipments through U.S. ports in 1994.

Respondents said that on-time performance and rates were their primary considerations in selecting an air carrier.

More than three-quarters of the forwarders transshipped some portion of their international air cargo via the U.S.

PORT TERMINAL OPERATORS SURVEY

Port terminal operators ratings of service factors were generally lower in 1994 for all modes.

CANADIAN BUSINESS TRAVELLERS SURVEY

Canadian business travellers were satisfied with air services in general except for links to major U.S. destinations. They were dissatisfied with the increasing cost of air travel and many felt that "business class" travellers should receive additional services.

Business travellers from Ontario and Quebec said they would travel more frequently by rail if the service was faster.

NORTHERN AIR SURVEY

Most respondents were satisfied with the quality of northern air passenger and cargo services in 1994 but were dissatisfied with its cost. Almost one-quarter of them had confidential contracts with air carriers.

INTRODUCTION

This chapter presents the views of the users of transport, both shippers and travellers. The National Transportation Agency has conducted surveys of users since 1988. The survey program is very comprehensive, covering both freight and passenger transport in all modes in all areas of the country. In-depth interviews of the motor carrier industry complement the program. See Appendix A for information on and selected data from the Agency's 1994 survey program.

SHIPPERS SURVEY

The Agency's Shippers Survey is the primary means for learning the opinions of users of freight transport services in Canada. It is supported by 24 industry associations whose members include most major shippers in Canada in addition to many smaller ones. The survey collects information on how shippers feel about service quality, competition and other issues. Their answers on prices, markets, their facilities and other questions give a complete picture of the shippers' perspective on transportation in Canada in 1994.

General Information

Who answered the Shippers Survey?

Survey results were drawn from 561 respondents representing a broad range of resource and manufacturing industries in all parts of Canada. They operate about 4,900 facilities employing some 230,000 Canadians.

In 1994, respondents reported that they had spent about:

- \$3.5 billion on rail transport;
- \$4.1 billion on truck transport;
- \$2.1 billion on marine transport; and
- \$0.3 billion on air cargo transport.

Where were their Canadian facilities located?

About 15 per cent of the facilities were in British Columbia, 24 per cent in the rest of western Canada, 32 per cent in Ontario, 19 per cent in Quebec and ten per cent in Atlantic Canada.

What factors have the most impact on their transportation decisions?

Rates, reliability, transit times and frequency.

Did the volume of their traffic change in 1994?

Yes. They shipped greater volumes in all modes, especially truckload.

Where did their traffic go to or come from?

Rail and truck traffic: about 61 per cent in Canada, 36 per cent with the U.S. and three per cent with Mexico.

Marine traffic: about 85 per cent overseas, including Mexico, and five per cent with the U.S.

Air cargo: split nearly equally among Canadian, U.S. and other international areas.

Did they shift traffic between modes in 1994?

About one in five rail users shifted traffic from truck, usually to get a better price.

Only about seven per cent of truck users shifted traffic from rail, for a variety of reasons, including changes in market conditions.

Very few shippers reported other modal shifts.

How was the overall quality of service in 1994?

Most shippers said service quality was satisfactory and the same as in 1993.

Rail carload and non-U.S. international air cargo users were much less satisfied in 1994 than users of other modes.

A higher proportion of rail carload users said service was worse in 1994 compared to 1993.

How did freight rates change in 1994?

Shippers reported an average increase of 1.5 per cent.

Rate increases were lowest in the domestic markets, about 1.5 per cent in the Canada-U.S. markets and highest in the other international markets.

Eight per cent of shippers negotiated lower rates; of the rest, about equal numbers reported no change or a small increase.

Shippers reported the lowest increases for rail freight; the highest for air cargo.

How did shippers handle proposed price increases in 1994?

The most frequent reaction among users of all four modes was to negotiate a reduction in the proposed increase. Shippers using rail and

Table 3.1
Shipper Reaction to Proposed Price Increase

	Air	Rail	Trucking	Marine
	<i>per cent</i>			
Negotiated a reduction of increase	32	45	40	35
Adjusted the price of goods accordingly	13	18	11	17
Absorbed the increase	31	20	19	27
Switched to another firm (same mode)	16	6	26	16
Switched to another mode of transport	7	10	3	2
Dropped some markets	1	1	1	3
Total	100	100	100	100

Source: Agency's Shippers Survey

trucking services had the most success in this approach. Users of trucking services were least likely to pass the increase through by increasing prices, opting more frequently to switch to another trucking firm.

What did shippers think of competition within modes in 1994?

Two out of three shippers thought carriers wanted to compete against each other; one out of three thought carriers were more willing to compete in 1994 than in 1993.

Shippers reported the most interest in competing came from overseas marine carriers; the least interest was shown by domestic and transborder marine carriers and Canadian rail carriers.

Rail Transport

How many respondents reported using rail in 1994?

Thirty-one per cent of the respondents said they used rail intermodal services and 32 per cent reported using rail carload services.

The above includes 17 per cent of the respondents who reported using both intermodal and carload rail services.

How many of their facilities had direct access to rail service?

About 700 of the respondents' facilities across the country were directly on rail and, of these, about 250 had direct access to two or more railways.

About 450 facilities were located on only one railway company and, of these, about 280 (62 per cent) were within interswitching limits (30 kilometres) of another railway company.

Competition

How many shippers had cars interswitched in 1994?

Just over half the rail carload respondents reported interswitching cars.

Two-thirds of the shippers used interswitching to obtain either a better routing for their traffic or more favorable rates.

Only about 30 per cent of small shippers (carload freight bills under \$1M) but more than 80 per cent of large shippers (over \$1M) interswitched cars.

How many railway users were in negotiations with Canadian railways in 1994?

Around 60 per cent of the railway users who responded to the survey said they were in negotiations with Canadian railways in 1994.

Compared to rail shippers who negotiated rates in 1994, those rail shippers who were not in negotiations had a much lower opinion of the railways' willingness to compete against each other.

What bargaining tools did railway carload shippers use in railway negotiations?

Twenty-five per cent of carload shippers in railway negotiations said they used the possibility of interswitching as a bargaining tool.

One-eighth of shippers who negotiated rates with railways used the possibility of a competitive line rate as a bargaining tool; this proportion increases to twenty per cent for large shippers and declines to only three per cent for small shippers.

About 50 per cent of rail carload shippers who used competitive line rates as a bargaining tool had facilities located beyond the 30 kilometre interswitching limit.

Shippers who used these bargaining tools in negotiations had a somewhat more favorable opinion of the railways' willingness to compete against each other than the shippers who did not use them.

What factors helped shippers the most to achieve competitive terms and conditions for rail services?

Most important overall was access to other modes of transport, followed by confidential contracts, interswitching and competitive line rates.

Confidential contracts had more value to carload shippers than intermodal shippers. Carload shippers ranked confidential contracts as being just as important as access to other modes.

The value of confidential contracts was found to be much higher to large shippers for both intermodal and carload than small shippers. Large shippers ranked confidential contracts as the most important factor.

Did shippers find railway companies willing to compete against each other in 1994?

Overall, around 60 per cent of respondents thought railways were interested in competing against other railways; 71 per cent gave U.S. railways a favorable rating compared to only 57 per cent who rated Canadian railways favorably.

Similarly, 28 per cent thought U.S. railways were more willing to compete against other railways in 1994 than in 1993 compared to 21 per cent for Canadian railways.

These responses contrast with those in the 1993 survey where U.S. and Canadian railways had approximately the same rating for intra-modal competition.

Was there any difference between small and large shippers in their assessment of the railways' willingness to compete?

Large shippers had a much higher opinion of the railways' willingness to compete against other railways in 1994; this also holds when the railways' willingness to compete in 1994 is contrasted to their willingness in 1993.

Did shippers in the transborder market rate carriers' willingness to compete differently from shippers in the domestic market?

Higher proportions of transborder shippers than domestic shippers said railways were interested in competing against each other in 1994. This was true for both Canadian and U.S. railway companies.

Different responses for Canadian and U.S. railways emerge when willingness to compete is compared for 1994 and 1993. Twenty per cent of transborder shippers thought Canadian railways were more interested in competing in 1994, compared to only 15 per cent of domestic shippers. The figures for U.S. railways are 18 and 28 per cent for transborder and domestic shippers respectively.

Rates and Contracts

How did railway freight rates paid by shippers change in 1994?

Shippers' rail rates went up an average of 1.14 per cent, with slightly smaller increases for intermodal and transborder than for carload and domestic.

A lower average increase (0.22 per cent) was reported for 1993 but, as in 1994, the increase for transborder traffic was slightly lower than domestic.

Large intermodal users reported virtually no change in rates while their carload counterparts paid about a one per cent increase.

In general, small shippers reported average increases in the range of 1.5 to two per cent.

Figure 3.1
Rail Rate Changes
Reported by Rail Shippers



1994 M = Intermodal

1994 C = Carload

Source: Agency's Shippers Survey

How many shippers had confidential contracts with Canadian railways in 1994?

Some 35 per cent of rail intermodal users and 53 per cent of rail carload users reported having confidential contracts.

While 90 per cent of large shippers said they had contracts, only one in four of the small shippers said they had them.

A higher proportion of domestic than transborder shippers had confidential contracts.

Shippers with contracts moved about 80 per cent of their 1994 traffic on Canadian railways under confidential contract regardless of whether it was domestic or transborder.

Large carload shippers moved close to 90 per cent of their traffic under contract.

How did the use of contracts in 1994 compare to 1993?

Compared to 1993, a higher proportion of transborder than domestic shippers increased the share of their rail traffic under contract in 1994, perhaps reflecting Canada's booming exports to the U.S.

Small shippers showed a bigger tendency than large ones to increase the amount of traffic they shipped under contract in 1994 over 1993.

Survey results on contracts were similar in 1993 and 1994.

Service

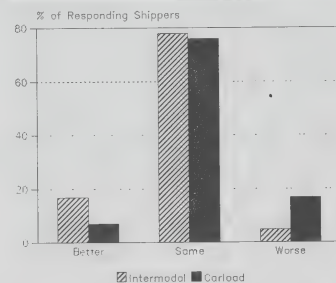
What did shippers think of railway service in 1994?

There was a substantial difference between shippers' assessments of rail intermodal and carload services; satisfaction with overall quality was 91 per cent for rail intermodal service and 71 per cent for carload service.

When asked to compare 1994 to 1993, 17 per cent thought overall quality of intermodal service had improved and only five per cent that it had deteriorated. For carload, only seven per cent thought it had improved and 17 per cent said the quality had deteriorated.

In the 1993 survey, 28 per cent reported that the overall quality of rail service had improved compared to 1992.

Figure 3.2
Changes in Overall Quality
of Rail Services - 1994 vs 1993



Source: Agency's Shippers Survey

What accounts for the lower rating of railway carload service in 1994?

A comparison of intermodal and carload service on the basis of ten service factors gave intermodal significantly more favorable ratings in all factors except shipment tracing and claims handling, which had similar ratings for both types of rail service.

Compared to 1993, the largest rating drop in 1994 was the availability of railway equipment — a problem that drew much attention during 1994.

Other major deteriorations in service from 1993 to 1994 were reported for service reliability and frequency, equipment condition and transit time

— in contrast, shipment tracing improved considerably according to respondents.

How did the individual service factors compare to each other in 1994?

For rail intermodal, the highest satisfactory ratings were given to equipment condition, cargo handling and shipment tracing, while the lowest went to service reliability and transit time.

For rail carload, the highest satisfactory ratings were given to cargo handling, shipment tracing and claims handling, while the lowest went to service reliability, transit time and equipment supply.

Did large rail intermodal users report better service than small ones?

One hundred per cent of the large shipper respondents thought the overall quality of service was satisfactory, compared to 86 per cent of the small ones.

Compared to 1993, the proportion of large shippers reporting better overall quality of service in 1994 was double that of small shippers.

Ratings show that small and large shippers were equally satisfied with the individual intermodal service factors, with the exception of equipment supply, which earned more satisfaction ratings from small shippers, and transit time, which was more satisfactory to large shippers.

Did large rail carload users report better service than small ones?

Responses showed no difference between the two in terms of overall quality of service in 1994, but

proportionately more large shippers said overall quality of service had deteriorated in 1994 compared to 1993.

For the individual carload service factors, small shippers generally reported a higher level of satisfaction, especially for equipment supply and condition and for product care.

Other Matters

Were many Canadian shippers in a position to be affected by the possible merger of CN and CP operations in eastern Canada?

About a third of all rail shippers said they had facilities located on directly affected railway lines, and about two-thirds of their Canadian railway traffic was involved.

What factors were the most important to Canadian railway shippers in making transportation decisions?

Rates, reliability, transit times and frequency were the most important for both intermodal and carload users in both the domestic and transborder markets.

Generally, ratings by small and large shippers showed no difference in the importance of factors, except that large carload shippers to Mexico evaluated service reliability as important as rates.

Trucking

How many of the shippers survey respondents reported using trucking in 1994?

Use of truckload services (TL) was reported by 84 per cent of

respondents. Less-than-truckload (LTL) was used by 78 per cent of respondents.

What type of trucking services and carriers did shippers use in 1994?

Over half said they used Canadian for-hire carriers in the TL and LTL segments for their intra- and extra-provincial domestic shipments.

For TL shipments to the U.S. and Mexico, 42 per cent of shippers reported using the services of Canadian for-hire companies while 30 per cent of shippers reported using the services of U.S.-based companies.

Although respondents generally use for-hire carriers, some companies reported using their own fleet. Twenty-six per cent indicated using their own fleet for intra-provincial movements in the TL segment while 20 per cent used their own fleet in the LTL intra-provincial segment. A very small proportion used their own fleet for extra-provincial movements in both TL and LTL.

A small proportion of shippers reported using private carriers as for-hire carriers. The majority of shippers reported no change from last year in the use of the services of a private carrier operating as a for-hire carrier.

Private fleet

What percentage of shippers' 1994 truck traffic moved on equipment owned or leased by their company?

Forty per cent of shippers said they moved up to 20 per cent of their

volume on equipment owned or leased by their company.

Twenty-three per cent of shippers said they moved between 21 and 60 per cent of their volume on equipment they owned or leased.

Twenty-nine per cent said they moved over 60 per cent of their volume on equipment they owned or leased.

Was there any change in how shippers used their private fleet in 1994 compared to 1993?

Thirty-eight per cent of shippers said they made more use of their private fleet while 12 per cent said they made less use.

Service

How was the overall quality of service in trucking in 1994?

The overall quality of truckload and less-than-truckload service was satisfactory to close to half the respondents.

When asked to compare the overall quality of truckload service in 1994 to 1993, 17 per cent reported better service, 79 per cent said it stayed the same while four per cent said quality went down.

Opinions on less-than-truckload service quality were similar to those for truckload service.

How did shippers compare the individual service factors?

For truckload, they gave the highest satisfactory ratings to carrier cooperation, transit time and equipment condition, and gave the lowest to claims handling and equipment supply.

For less-than-truckload, shippers gave the highest satisfactory ratings to equipment condition, service frequency and carrier cooperation, and gave the lowest to claims handling, shipment tracing and transit time.

In comparing 1994 with 1993, shippers noted that the service factor that had deteriorated the most was the availability of truckload equipment.

Did large truckload users report better service than small ones?

Ninety-three per cent of large shippers (freight bills over \$10 million dollars) thought the overall quality of service was satisfactory, compared to 86 per cent of medium-sized ones and 78 per cent of small ones (i.e., those with annual freight bills less than a million dollars).

Twice the proportion of large shippers as of small shippers reported better truckload service in 1994 compared to 1993.

Did large less-than-truckload users report better service than small ones?

Every one of the large shipper respondents thought the overall quality of service was satisfactory, compared to 82 per cent of the medium-sized ones and 77 per cent of the small ones.

Volume

Did the volume of freight shipped by trucks change in 1994?

More shippers said they moved higher volumes of freight by truck in 1994 compared to 1993 in both TL and LTL.

Twice the proportion of shippers reported an increase in volume in less-than-truckload in 1994 compared to the 1993 survey.

Rates

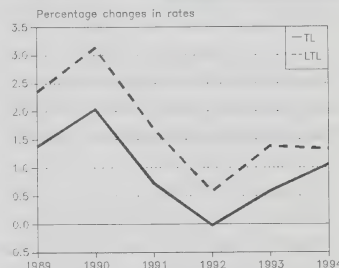
How were the freight rates in 1994?

Forty-three per cent said unit freight costs went up in 1994 in the domestic truckload market.

Over 75 per cent of those shippers above reported an increase ranging from one to four per cent. Shippers of all sizes gave the same opinion.

A minority said rates went down in the domestic truckload market. The decrease, however, was modest.

Figure 3.3
Average Rate Changes
in Domestic Trucking Services

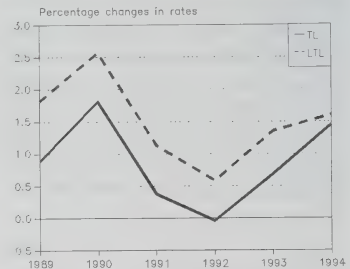


Source: Agency's Shippers Survey

A higher proportion of shippers, 49 per cent, reported higher freight rates in the international truckload market. The number of shippers reporting lower rates in that market has been going down since 1992 and is now at its lowest level.

Shippers held similar opinions about freight rates in the LTL market. Most shippers reported that rates did not change in the less-than-truckload segment while just over half said

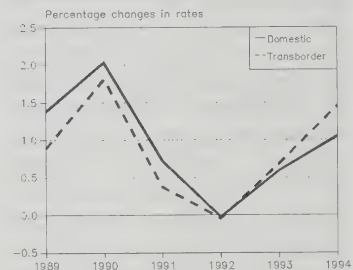
Figure 3.4
Average Rate Changes
in International Trucking Services



Source: Agency's Shippers Survey

rates went up. The survey found nearly identical results for the domestic and international less-than-truckload market in 1994. An increase of more than four per cent was noted by a slightly higher proportion of shippers in the less-than-truckload segment than in the TL segment.

Figure 3.5
Average Rate Changes
in Truckload Services

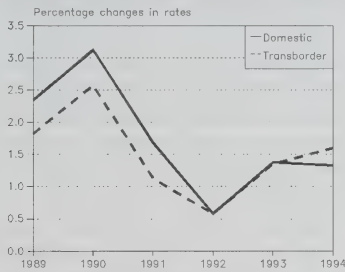


Source: Agency's Shippers Survey

Rate increases of over five per cent were reported most frequently by small shippers in all the noted markets.

Average rates decreased from 1989 to 1992. In 1993, shippers started seeing rates go up and the upward trend continued in 1994.

Figure 3.6
Average Rate Changes
in Less-Than-Truckload Services



Source: Agency's Shippers Survey

Average rate changes are higher in the international market than in the domestic one.

Both markets exhibit a similar trend — rates were going down until 1992 but started to increase in 1993. The 1994 average rate change of more than one per cent in all markets represents an upward trend in all but the LTL domestic market where it shows a downward trend.

Competition

Did shippers see any difference in the number of trucking firms competing for their business?

As in 1993, approximately two-thirds of shippers from all segments of industry found no differences in the level of competition for their business in 1994.

Regionally, shippers felt that carriers in Ontario, Quebec, and the Prairie provinces were the most willing to compete. Results are consistent with the large number of carriers operating in these jurisdictions.

Did shippers change trucking firms for their international traffic?

Approximately ten per cent of shippers reported that they had changed their transborder carrier between Canada and the U.S. or Mexico in 1994. Of these, equal numbers shifted traffic from a Canadian-based to a U.S.-based carrier or vice versa.

What do shippers find important in a trucking firm?

Shippers choose a trucking firm on the basis of several criteria. Not surprisingly, price is the most important criterion to shippers with service reliability a close second. This was true for both domestic and transborder shipments.

How do shippers react to a rate increase for trucking services?

When shippers face a rate increase they prefer to negotiate with the carrier for a lower increase in both TL and LTL services.

More than 50 per cent of shippers with an annual freight bill of \$1 million or more successfully negotiated a reduced rate increase with the carriers in both TL and LTL services. This is down from 1993, when over 65 per cent negotiated a lower increase.

Smaller shippers, with annual freight bills of less than \$1 million, were not as successful as their larger counterparts. However, the rate of success was almost the same in 1994 as it was for 1993 (TL: 37 per cent vs 38 per cent; LTL: 39 per cent vs 45 per cent).

What do shippers do if they won't accept increased cartage prices?

A widely used option by smaller shippers to obtain better rate levels is to rotate and change carriers regularly. Twenty-seven per cent of shippers adopted this approach in both TL and LTL services, making this the preferred strategy of small shippers. This option was chosen by over 20 per cent of larger shippers in the TL segment. However, this is a dramatic drop from the 45 per cent recorded in 1993.

Do shippers absorb price increases?

Nineteen per cent of shippers who use the truck mode stated that they absorbed their carriers' price increases.

What is the trend in shippers' reactions to rate increases?

Forty per cent of shippers in both TL and LTL successfully negotiated a reduction in carriers' price increases.

The above result is the lowest recorded in the last five years and shows that more shippers now recognize that carriers require some price increases to renew their fleets and continue to provide shippers with quality service.

One in four shippers reported switching to another trucking firm in reaction to a proposed price increase. Since more shippers — approximately one-in-three — chose this option in 1993, the 1994 survey confirms that shippers are remaining with carriers they know and trust.

Also, since the growth in manufacturing shipments is consuming excess carrier capacity, there is less excess capacity

available for shippers to use as a lever to maintain or lower carriers' prices.

Eleven per cent of shippers passed on carrier price increases to their customers. This rate is identical to that reported in 1993.

Shippers reported that, in 1994, they less frequently changed modes in response to a price increase. LTL shippers with over \$1 million in freight billing, reported no change in transportation mode. Overall, two per cent of TL and LTL shippers reported switching modes. This is the lowest percentage of TL shippers in five years.

Marine Transport

How extensive is the use of marine services?

Over 40 per cent of all respondents used marine containerized services in 1994, while almost 20 per cent used non-containerized general cargo services. Fourteen per cent said they moved bulk commodities by water. Forty per cent of marine shippers used some combination of containerized, bulk and general cargo services.

Annual expenses for containerized services were less than \$200,000 for almost 60 per cent of the users, and less than \$1 million for almost 80 per cent. The survey found similar results among users of non-containerized general cargo services. More than half of the bulk shippers incurred charges over \$200,000 in 1994, with 20 per cent exceeding \$1 million and 15 per cent exceeding \$10 million.

Are volumes shipped by marine services increasing?

Close to half of all users of marine containerized services indicated that volumes had increased over 1993. Only one in eight said volumes went down. For the most part, volumes increased in the range of one to 20 per cent although 14 per cent of container shippers experienced traffic growth in excess of 20 per cent.

One-quarter of all users of non-containerized general cargo services reported increased volumes in 1994, while six per cent reported decreases. Two-thirds of the increases ranged from one to 20 per cent.

Among bulk shippers, 35 per cent reported increased volumes, versus ten per cent reporting decreases. Again, about two-thirds of the increases fell in the one to 20 per cent range.

How did users of marine services make their transportation arrangements?

Twenty-five per cent of shippers using containerized services assigned their domestic traffic to intermediaries. For Canada-U.S. and other international shipments, this figure rose to about 40 per cent. The 60 per cent of international shippers dealing directly with carriers chose conference lines about twice as often as independent lines.

Users of non-containerized general cargo services showed a stronger tendency to use intermediaries, as 60 per cent used intermediaries for offshore traffic. Data on domestic and Canada-U.S. traffic was inconclusive.

The percentage of respondents using chartered vessels to move bulk commodities ranges through 65 per cent for Canada-U.S. traffic, 70 per cent for domestic traffic and 76 per cent for international traffic. Most other bulk traffic is handled in company-owned or leased vessels.

Why do shippers use intermediaries?

Exporters and importers of containerized cargo tended to rely on intermediaries and conference lines for multi-modal movements. Intermediaries played the most prominent role in international multi-modal shipments of non-containerized general cargo.

Shippers who dealt directly with carriers gave noticeably higher ratings than those using intermediaries for certain factors: frequency of sailings, service reliability, transit time, shipment tracing and overall service quality. However, the highest ratings on all service factors were given by shippers exploiting **both** options, that is, using intermediaries and dealing directly with carriers.

What were the most important factors to users of marine services in making their transportation decisions?

The top-rated factors were price and service reliability, with transit time a distant third. Next were service frequency and cargo handling/product care. Seamless transfer and EDI capability were eighth and ninth respectively among the factors rated in the survey.

How interested were marine carriers in competing for shipper traffic in 1994?

Shippers moving goods in the domestic and Canada-U.S. trade indicated an almost even split between interested and non-interested carriers. Four out of five of these shippers also noted that interest by marine carriers was the same in 1993.

In other international markets, about 85 per cent of marine shippers (both importers and exporters) found that carriers were interested in competing for their business. More importers (40 per cent) than exporters (31 per cent) said that carriers were more interested than in the previous year.

Carriers showed a particularly high interest in competing for traffic in certain export industries such as food products, rubber products, textile products, furniture and fixtures, machinery and agricultural products. Imports of food products and machinery also attracted particularly high competition.

For containerized traffic, there was no apparent connection between the amount of shippers' annual freight expenses and the willingness of carriers to compete for their business. However, for bulk shipping business, larger-volume shippers reported a pronounced increase in carrier competitiveness.

How did shippers rate marine services in terms of prices/rates, equipment supply, frequency of sailings, service reliability, transit time, space availability, shipment tracing, product care/cargo handling and overall quality in 1994?

Among shippers of containerized goods, more than 90 per cent of respondents were satisfied with all factors except prices/rates and frequency of sailings. Seventeen per cent were dissatisfied with prices/rates, and while 13 per cent felt that these were worse than in 1993, ten per cent said they were better. Twelve per cent were dissatisfied with frequency of sailings.

Satisfaction ratings were slightly lower among shippers of non-containerized general cargo, revealing dissatisfaction with frequency of sailing (20 per cent of respondents), service reliability (13 per cent), transit time (12 per cent), and prices/rates (11 per cent).

For bulk shippers, service reliability was the lowest rated factor with 21 per cent reporting dissatisfaction. Also, 19 per cent said service reliability had deteriorated since 1993. Eleven per cent were dissatisfied with prices/rates, but almost one in five said they were better than the previous year.

Satisfaction ratings for all service factors varied generally with the amount of total freight expenses. Shippers moving containerized or non-containerized general cargo and spending less than \$200,000 per year were significantly less satisfied than those in higher spending categories.

How did general cargo (containerized and non-containerized) rates compare with previous years?

Shippers in the Canada-U.S. market reported the lowest average rate increase in 1994 at less than one per cent. In other international markets, almost half of all respondents, both importers and exporters, experienced no change in rates.

Table 3.2
Marine General Cargo Rates - 1994

	Average Increase (%)
Domestic	1.86
Canada-U.S.	0.90
International	
Export	1.87
Import	1.52

Source: Agency's Shippers Survey

What was the impact of the Shipping Conferences Exemption Act (SCEA) on shippers?

Eighty-three per cent of respondents reported that SCEA had no known effect on their business. Of the small minority indicating some benefits, they most frequently mentioned the provision for Independent Action. The complaint resolution mechanism was least mentioned as a benefit.

What use did shippers make of ocean service contracts in 1994?

The proportion of shippers using service contracts dropped marginally from 1993 to 18 per cent for exporters and 19 per cent for importers. About half of these shippers move more than 60 per cent of their overseas trade this way. The

distribution between export and import contracts is 56:44.

What use did shippers make of Independent Action provisions in 1994?

A higher proportion of exporters (36 per cent) than importers (31 per cent) moved goods under Independent Action (IA) in 1994, although more than one in three of these exporters made only limited use of IA. Importers showed a much greater tendency to use IA exclusively.

Air Freight Transport

How many respondents reported using air cargo services in 1994?

Forty-seven per cent of the respondents using air cargo services in 1994.

Did the volume of air cargo shipped in 1994 change from 1993 levels?

While over half of the respondents reported no change, 37 per cent said they increased their volume of cargo shipped by air by an average of more than 20 per cent from 1993 levels. The remaining 11 per cent reported that their air cargo volumes dropped about 16 per cent.

How were air cargo volumes divided among markets in 1994?

About one-third of the respondents said they had shipped over 40 per cent of their air cargo to domestic markets. Another third reported that over 40 per cent of their air cargo shipments were to or from U.S. destinations. The other third said that other international markets accounted for over 60 per cent of their air cargo volumes.

How did air cargo shippers arrange for transportation in 1994?

The majority of domestic air freight transportation arrangements (77 per cent) and Canada-U.S. arrangements (63 per cent) were made directly with an air carrier. The majority (57 per cent) of international air cargo movements were arranged through intermediaries or freight forwarders.

What types of air cargo services were used?

The majority of shippers used scheduled services on all cargo aircraft. The second choice was cargo services offered on passenger aircraft (i.e., in the belly of passenger aircraft or on the main deck of combi- or passenger-cargo combination aircraft).

Scheduled all-cargo services were used by 60 per cent of domestic shippers, over 57 per cent of Canada-U.S. shippers and by 50 per cent of international shippers.

Cargo capacity in the belly of passenger aircraft or on combi-aircraft were used by a third of the international shippers and by just over a quarter of the domestic and transborder shippers.

How did shippers rate the air cargo services in the domestic, Canada-U.S. and other international markets in 1994?

A very high percentage of the respondents for all three markets rated as satisfactory service characteristics such as frequency, availability of direct and competing services, aircraft capacity, service reliability, cargo handling and

tracing, transit times, liability coverage, etc.

On average, over 90 per cent of the respondents said they were satisfied with the quality of air cargo service in the domestic and Canada-U.S. markets. A slightly lower percentage (82 per cent) said they were satisfied with the service in other international markets.

A great majority of the respondents (85 per cent for domestic, 89 per cent for Canada-U.S. and 87 per cent for other international markets) felt that service levels were unchanged from last year. Eight per cent, however, thought that service had gone down from 1993 levels.

How common are confidential contracts in the air freight industry?

Only nine per cent of the respondents reported moving domestic air cargo under terms and conditions set out in a confidential contract. This is down from the 18 per cent who reported using confidential contracts in 1993.

Those shippers who negotiated confidential contracts with an air carrier generally committed a high percentage of their traffic to the agreement. In 1994, more than three-quarters of the shippers with confidential contracts said that at least half of their 1994 air freight shipments were subject to the terms and conditions in a contract. This represents a drop from 1993 when 81 per cent of the respondents reported using confidential contracts to move over half of their air freight volumes.

How did unit air cargo costs in 1994 compare with those of 1993?

While just under half of the respondents felt that 1994 air cargo rates in domestic, Canada-U.S. and other international markets had stayed the same, 45 to 47 per cent said that rates had gone up from 1993 levels. About five per cent of the respondents felt that rates had gone down.

Over half of those respondents who reported using confidential contracts in 1994 said that their confidential contract rates stayed at 1993 levels. Only 23 per cent said that their rates had gone up.

The Canadian Shippers' Council

The Canadian Shippers' Council (CSC) is officially designated under the Shipping Conferences Exemption Act (SCEA) to represent the interests of Canadian shippers and submits an annual report on its activities to the Minister of Transport.

In 1994, the CSC continued its efforts to combat growing ancillary charges levied separately from conference tariffs. In the Council's view, conference practices of extracting cost items from the basic freight rates and converting them into non-negotiable surcharges are an abuse of power for which SCEA provides no remedy. The CSC report outlined some specific initiatives taken in this area with the Canada Westbound Rate Agreement and the Canada UK/Continental Freight Conference.

The CSC re-iterated its call for the abolition of SCEA, pointing out that both Europe and the U.S. are moving toward the removal of anti-trust immunity for shipping conferences.

On average, shippers faced a 1.7 per cent increase in air cargo rates in the domestic market, a 2.3 per cent increase in the Canada-U.S. market and a 2.2 per cent increase in other international markets.

PORT TERMINAL OPERATORS SURVEY

Who answered the PTO survey?

Sixty respondents operating over 130 terminals in the Atlantic Provinces, Quebec, Ontario, Manitoba and British Columbia participated in the survey.

Just under half of the terminals are located in ports affiliated with the Canadian Ports Corporation. Other terminals are affiliated with Transport Canada's Harbours and Ports Directorate, Harbour Commissions or are privately owned and operated.

All types of terminals are represented: dry bulk, general cargo, forest products, container, ro-ro, petroleum products, liquid bulk and grain.

Survey responses represent operations of all sizes, in terms of employees as well as revenues. Almost one-third employed under 25 people, and another third employed more than 100.

About 58 per cent of the operators said that they had invested in or purchased new equipment during the year.

What kind of traffic did they handle in 1994?

Overall, the operators participating in the survey handled over 100 million tonnes and over 91,000 TEUs of freight.

About 65 per cent of the operators handled domestic shipments; 54 per cent were involved in transborder business and 80 per cent handled

other international freight. Clearly some handled traffic in more than one market.

Of those handling domestic freight, one-third said that it represented less than ten per cent of their handlings while another one-third indicated that it represented more than 90 per cent.

Of those handling transborder freight, about 40 per cent said that it represented less than ten per cent of their total handlings.

Of those dealing in other international freight, about one-third said it represented over 90 per cent of their total handlings.

Of the PTOs handling transborder and other international freight, about 25 and 30 per cent respectively said they dealt only with exports.

What modes were used for landside transportation?

Truck was by far the most popular landside transportation mode for domestic and transborder freight, with rail carload a distant second.

For other international freight, shippers use trucks only slightly more than rail carload.

What factors affected the viability of port terminal operations in 1994?

While the majority of respondents said that the factors in the survey did not affect their operations, more PTOs reported a positive than a negative effect for the factors "inland surface transport services" and "technological changes".

Table 3.3
Impact of Selected Factors on Port Terminal Operations

Factor	% of respondents		
	Positive Impact	No Effect	Negative Impact
Inland Surface Transport Services	26	56	18
Technological Changes	25	67	8
Operating Costs	25	43	32
Competition from Canadian Ports	4	60	36
Competition from U.S. Ports	6	62	32
Rationalization Programs of Shipping Lines	9	74	17
Other	14	14	71

Source: Agency's Port Terminal Operators Survey

Conversely, the factors "operating costs" and "competition from Canadian and U.S. ports/terminals" were viewed negatively.

What did PTOs say about marine operations at their terminals?

Although over half of the respondents said that more ships called at their terminal in 1994 than 1993, only 20 per cent of respondents said the number of lines had gone up.

Respondents cited better markets, higher volumes and a more active economy as reasons for the increases.

How did PTOs rate the services offered by marine carriers at their terminals?

By and large, they assessed the general/containerized cargo and bulk services in domestic and transborder operations as good or acceptable.

In other international trade, they gave the same assessment for non-

conference inbound and outbound services.

Sixty per cent of the respondents rated inbound conference services as good. Although outbound conference services received the same rating from 44 per cent of the PTOs, equal numbers of the rest of the PTOs gave ratings of acceptable or poor.

What were PTO views on rail services?

Two-thirds of respondents said that the competitive rail access at their terminals was satisfactory.

Two-thirds said that Canadian rail carriers were interested or very interested in competing with each other or with other modes for the traffic moving through their port facilities.

While 37 per cent of the operators said that railway services to and from their facilities had not changed from

1993, almost 40 per cent saw either minor or significant deterioration.

Operators pointed to rail labour problems as a factor affecting service at terminals.

How did the PTOs rate rail carriers in terms of service factors in 1994?

Opinions were mixed on all service factors. Rail carriers were rated "good" more frequently than "acceptable" or "poor" for carrier co-operation (45 per cent) and switching services (37 per cent).

Quality of service was seen to be "acceptable" or "good" by equal numbers of respondents (37 per cent each). All respondents rated product care as "acceptable" or "good", (64 and 36 per cent respectively).

What were PTO views on trucking services?

Sixty-five per cent of the PTOs used truckload for-hire services while ten per cent used less-than-truckload.

Of the for-hire truckload users, about 70 per cent saw no change in the services in 1994 compared to 1993, and the rest, who said service had changed, noted that nearly all changes were improvements.

Respondents saw little change in less-than-truckload services.

How did PTOs rate motor carriers in terms of service factors in 1994?

The majority of the PTOs rated truckload services as good on all service factors, and an almost equal number rated them as acceptable.

Table 3.4
PTO Ratings of Transportation Service Factors

	1994			1993		
	Good	Acceptable	Poor	Good	Acceptable	Poor
<i>% of respondents</i>						
Rail Services						
Equipment Supply	37	46	17	45	29	26
Equipment Condition	31	63	6	55	42	3
Switching Services	38	30	32	38	41	21
Service Frequency	32	50	18	42	52	6
Service Reliability	27	43	30	38	50	12
Transit Time	31	58	11	43	37	20
Product Care	36	64	—	55	42	3
Carrier Co-operation	46	30	24	51	40	9
Quality of Service	38	38	24	51	34	14
Efficiency of Service	31	50	19	44	41	15
Truckload Services						
Equipment Supply	51	44	5	72	28	—
Equipment Condition	51	44	5	55	42	3
Service Frequency	55	37	8	77	23	—
Service Reliability	61	32	8	63	34	3
Transit Time	58	37	5	71	29	—
Product Care	53	45	3	67	33	—
Carrier Co-operation	69	23	8	81	19	—
Quality of Service	54	44	3	77	23	—
Efficiency of Service	59	38	3	67	33	—
Domestic — Marine Services						
Bulk Cargo	53	41	6	—	—	—
General/Containerized	57	42	—	—	—	—
Transborder — Marine Services						
Bulk Cargo	48	44	8	—	—	—
General/Containerized	55	45	—	—	—	—
International — Conference Liner Services						
Import	60	20	20	80	15	5
Export	44	28	28	71	29	—
International — Non-Conference Liner Services						
Import	46	38	15	80	12	8
Export	45	40	15	69	40	15

Source: Agency's Port Terminal Operators Survey

Responses on less-than-truckload services were divided equally between good and acceptable.

The highest rating for both truckload and less-than-truckload services went to carrier co-operation.

NORTHERN MARINE RESUPPLY USERS SURVEY

Who responded to the survey?

The 60 responses represented users of marine resupply services in the Mackenzie/Western Arctic, Eastern Arctic, Lake Athabasca and Keewatin/Hudson Bay systems. The 1994 survey did not include services via the Inside Passage along Canada's west coast and the Alaskan Panhandle. Respondents included users of all major carriers operating in these systems and of these, four out of five said they used marine resupply services regularly. Over 70 per cent of respondents said they were captive to one marine carrier, especially those in the Keewatin/Hudson Bay and Eastern Arctic systems. The lowest proportion of users feeling "captive" to only one carrier is located in Lake Athabasca.

What type of goods did they ship?

In the Lake Athabasca and Keewatin/Hudson Bay systems, 100 per cent of the goods shipped were for community maintenance or development. Some shippers in the Mackenzie/Western Arctic system

(19 per cent) and in the Eastern Arctic (11 per cent) reported shipments of materials related to resource exploration or development. Most respondents shipped general or containerized cargo. A smaller proportion shipped bulk fuel.

How did users rank the importance of various service factors?

Respondents in all systems ranked prices/rates as the most important factor. The second highest priority for users in the Mackenzie/Western Arctic and Lake Athabasca systems was on-time performance. In the Keewatin/Hudson Bay and Eastern Arctic systems, the second most important factor was loss and damage/payment of claims (in the Eastern Arctic this factor was tied with flexibility for second in importance). In comparison, loss and damage/payment of claims was ranked fifth among Mackenzie shippers and was not even ranked by Lake Athabasca respondents. Users in all systems generally agreed on flexibility as the third priority.

Table 3.5
User Ratings of Marine Resupply Services

Overall Service Rating 1994 vs 1993	Mackenzie/ Western Arctic	Eastern Arctic	Lake Athabasca	Keewatin/ Hudson Bay
	<i>% of respondents</i>			
Better	15	25	50	33
Same	77	71	50	67
Worse	8	4	—	—

Source: Agency's Northern Marine Resupply Users Survey

How did users view freight rates?

For general/containerized cargo, responses by users in all four systems were consistent: about three-quarters said that rates were reasonable; the rest said rates were too high. The breakdown for bulk fuel was similar, although a smaller proportion of users in the Lake Athabasca and Keewatin/Hudson Bay systems said rates were reasonable. Rates appear to have been most stable for Athabasca shippers; almost 90 per cent experienced no change from 1993. Three-quarters of Mackenzie/Western Arctic shippers also reported no change, but equal numbers of the remaining quarter experienced either rate increases or decreases. Less than 70 per cent of Eastern Arctic Sealift users reported stable rates, and 24 per cent noted increases. Half of the respondents in the Keewatin/Hudson Bay system said rates were the same as 1993; of the rest, more paid lower rates (30 per cent) than higher rates (20 per cent).

How did users view competition in marine resupply services?

As in past years, there was great polarization of views on the need for more competition in marine resupply services. In 1994, those opposed to more competition appear to have gained significant strength, ranging from 63 per cent of Mackenzie/Western Arctic respondents to 78 per cent in the Athabasca. The 1993 majority of competition advocates in the Eastern Arctic reversed their opinion in 1994. Many comments referred to the lack of volumes that would be necessary to support more competing carriers.

Table 3.6

User Ratings of Principal Resupply Carriers

Rating of Carriers	Frequency	Prices/Rates	On-time Performance	Flexibility	Loss & Damage/Payment of Claims	Schedule
<i>% of respondents</i>						
Mackenzie/Western Arctic System						
Good	37	19	37	32	42	38
Acceptable	52	70	48	40	42	50
Poor	11	11	15	28	15	12
Eastern Arctic Sealift						
Good	44	23	53	38	50	34
Acceptable	52	67	47	59	35	66
Poor	4	10	—	3	15	—
Lake Athabasca System						
Good	90	50	67	56	56	70
Acceptable	10	50	33	33	44	30
Poor	—	—	—	11	—	—
Keewatin/Hudson Bay						
Good	55	36	64	45	73	45
Acceptable	45	55	27	55	18	45
Poor	—	9	9	—	9	10

Source: Agency's Northern Marine Resupply Users Survey

What use did they make of other modes?

Air services were used by 90 per cent of the respondents, except those in the Mackenzie/Western Arctic system where 82 per cent used air. As well, 75 per cent of Mackenzie Valley shippers used all-weather and winter roads and 40 per cent of Athabasca respondents reported using winter roads. In the Eastern Arctic and Lake Athabasca, one out of three respondents reported shipping more cargo by air than by marine. Among Mackenzie and

Lake Athabasca shippers, 39 per cent and 50 per cent respectively said they used road as much or more than marine transport.

What other issues concern users of northern marine resupply services?

One issue mentioned frequently is the timing of resupply. An early schedule and on-time performance are critical for the delivery of construction materials since the building season in the far North is so short.

The Government of the Northwest Territories (GNWT), the largest single customer in the North, raised several issues. The GNWT has turned its attention to improving the cost-effectiveness and increasing northern involvement in marine resupply systems. It has already put some bulk fuel supply contracts for Arctic points out to tender and is working with Eastern Arctic Sealift officials on improvements such as multi-year contracts for shipping companies, better policing of shipper commitments and more flexible tariffs. The GNWT removed its longstanding designation of Northern Transportation Company Limited as the "carrier of choice" for Mackenzie River shipments of government cargoes destined to points between Fort Simpson and Fort Good Hope. This change allows other carriers to bid for the business.

FREIGHT FORWARDERS SURVEY

Who responded to the survey?

Thirty-eight freight forwarders completed the survey. These respondents represented companies providing air and marine freight forwarding services, and in particular, members of the Canadian International Freight Forwarders Association. Views were solicited from companies whose revenues from international air and marine freight forwarding operations exceeded 20 per cent of total revenues.

Marine Transport

Who responded to the marine sections of the survey?

A total of 31 respondents provided information on their use of ocean services and rates.

To what extent did they use conference shipping lines versus independent carriers?

All respondents reported assigning some traffic, both inbound and outbound, to conference lines and to independent carriers in 1994. For outbound traffic, about half of the forwarders used conference lines for more than 50 per cent of their shipments; one out of three used conferences almost exclusively. Respondents using independents tended to ship smaller proportions of their traffic this way. For inbound traffic, four out of five moved more than 50 per cent of their shipments by conference lines, with one out of five using conferences almost exclusively. Again, the tendency to ship smaller proportions of shipments by independent carriers

was even stronger for inbound traffic.

What factors were most important in selecting a shipping line?

Prices/Rates was ranked first by a considerable margin. Space Availability, Frequency of Sailings, Transit Time and Overall Service were tightly grouped as second priorities.

What changes did freight forwarders notice in conference services in 1994?

An increase in the number of conference carriers was noted by 30 per cent of respondents; 23 per cent noted a decrease. Seventy per cent reported increased prices/rates while virtually no decreases were reported. About one-third of respondents indicated an increase in frequency of sailings, while transit times appeared to be relatively stable. For space availability, 21 per cent observed an increase and 32 per cent noted a decrease.

How did respondents rate conference and non-conference services in 1994?

A large majority rated both types of services highly, with 93 per cent judging conference services to be "reasonable" or "good", while a slightly smaller proportion (87 per cent) gave the same rating to non-conference services. A larger difference was in the proportions of these ratings in the "good" category, where conferences led 60 per cent to 29 per cent.

To what extent did non-conference lines provide a viable alternative to conference carriers in 1994?

Responses were very similar for both inbound and outbound traffic, with 90 per cent or more reporting that non-conference lines were a viable alternative at least to a limited extent. Less than one out of ten forwarders found non-conference carriers not to be a viable alternative.

How much traffic did forwarders route through U.S. ports in 1994?

Almost all forwarders routed some shipments through U.S. ports in 1994 — 90 per cent of forwarders in the case of outbound traffic and 86 per cent in the case of inbound traffic. For most, this amounted to less than 20 per cent of their shipments, especially for inbound traffic.

What were the most important factors in deciding to ship via U.S. ports?

The predominant factor was prices/rates, followed by the non-availability of direct service to/from Canada. Frequency and transit time were in the middle of the rankings,

significantly ahead of space availability. Much further down the rankings was the preference of shippers (clients).

How did ocean freight rates in 1994 compare with those in 1993?

For outbound freight, rates increased by an overall average of 6.3 per cent. Some respondents reported no changes in rates; none reported a decrease. For inbound traffic, rates increased by an overall average of 4.2 per cent. About one out of five respondents reported no change in rates while only one reported a decrease.

What difference was there between conference and non-conference rates?

For both outbound and inbound traffic, non-conference rates were lower by an average of 11 per cent.

What use did forwarders make of standard conference rates, Independent Action, service contracts, and non-conference rates in 1994?

The majority of respondents using Independent Action shipped less than 20 per cent of their traffic this

way, both inbound and outbound. Of the few forwarders using service contracts, none moved more than 35 per cent of their outbound traffic or more than ten per cent of their inbound traffic this way.

How frequently did respondents use forwarders' through rates?

Almost all forwarders used these rates in 1994, for both outbound (87 per cent) and inbound (95 per cent) international traffic. Most used through rates for more than 50 per cent of their traffic.

How many respondents used Electronic Data Interchange (EDI) in the arrangement of ocean shipments in 1994?

Only ten per cent reported using EDI in 1994.

Air Transport

Who responded to the air section of the survey?

Thirty-one respondents provided information on air cargo services and rates. In 1994, they reported handling about 117,000 metric tonnes of Canada-U.S. air cargo and about 727,000 metric tonnes of international air cargo.

What were the air freight forwarders' most important markets?

Forwarders indicated that Europe was the largest trading area for both their inbound and outbound air cargo shipments (27 per cent of inbound shipments and 24 per cent of outbound).

Asia was the next most important market with inbound and outbound shipments accounting for 15 per cent

Table 3.7
Use of Marine Rate Options by Forwarders in 1994

Features/ Usage	Standard Conference Rates	Independent Action	Service Contracts	Non- Conference Rates
<i>% of respondents</i>				
Exclusively/ Frequently	36	20	14	32
Occasionally	50	33	34	68
Not Used	14	47	52	—

Source: Agency's Freight Forwarders Survey

and 13 per cent respectively of all air shipments.

How did freight forwarders rate air cargo services in 1994?

Most forwarders indicated that transborder and other international markets were served reasonably well by both Canadian and foreign carriers.

Canadian carriers' services were rated higher than foreign carriers in transborder and Canada-South/Central America/Caribbean markets.

Forwarders were more satisfied with the services of foreign carriers in the Canada-Europe and Canada-Asia markets.

Which factors did forwarders consider to be the most important when selecting an air carrier for their client?

On-time performance, rates, availability of direct flights and frequency of service were the main characteristics considered by freight forwarders.

What percentage of freight forwarders' international cargo was transshipped via U.S. airports?

Eighty per cent of responding freight forwarders indicated that they had transshipped some portion of their outbound air cargo via U.S. airports, while 76 per cent of the forwarders reported that their inbound cargo moved in the same manner.

In over half the cases, inbound and outbound transshipments represented one to ten per cent of a forwarders' total air shipments.

Table 3.8
Air Cargo Service Ratings

Markets rated	Canadian Air Carriers	Foreign Air Carriers
	<i>% of respondents rating services "reasonable" to "good"</i>	
Canada-U.S.	75	71
Canada-Europe	75	91
Canada-Asia	79	89
Canada-South/Central America/Caribbean	56	55

Source: Agency's Freight Forwarders Survey

Seven per cent of the respondents indicated that more than 51 per cent of both their inbound and outbound cargo moved via U.S. airports.

What were the most important factors to freight forwarders when making decisions regarding the transshipment of international cargo via U.S. airports?

Forwarders looked primarily at factors such as fares, transit time, space availability and whether there was direct service to/from Canada.

What percentage of forwarders' air cargo moved on road feeder services to/or from U.S. airports?

Eighty per cent of forwarders reported using road feeder services (RFS) for part of their international traffic; 74 per cent indicated RFS usage for a portion of their Canada-U.S. shipments. In total, road feeder services moved over 60,000 metric tonnes of the respondents' international inbound cargo and more than 9,800 metric tonnes of their outbound cargo. Respondents who used these services for transborder shipments, moved

89,000 and 91,000 metric tonnes of inbound and outbound cargo respectively.

About nine per cent of the respondents indicated that over 51 per cent of their outbound cargo destined for international points moved on road feeder services to U.S. airports; for Canada destined inbound cargo, 12 per cent used RFS for over half of their shipments.

For shipments destined to points within the U.S., 13 per cent of forwarders used feeder services to a U.S. airport gateway for more than 51 per cent of their cargo; 14 per cent used these services for over half of their Canada destined cargo.

The size of air cargo shipments appeared to be a factor in decisions regarding RFS use. All companies handling over 10,000 metric tonnes of air cargo used road feeder service for over 65 per cent of their total transborder shipments and less than ten per cent of their total international shipments.

Use of RFS varied for companies which handled less than 10,000 metric tonnes of transborder and international air cargo.

What factors influenced freight forwarders' decisions regarding air cargo moving on road feeder services?

Forwarders considered rates, frequency of service and transit time as the most important factors in selecting air cargo service for both international and transborder markets.

How did air freight rates change in 1994?

On average, air freight rates increased 2.4 per cent, inbound cargo increasing less than outbound and transborder rates increasing less than international.

In 1993, the average rate increase was 1.6 per cent.

The Canada-Asia market reported the highest rate of increase, 3.3 per cent, which is indicative of demand growing at a faster rate than capacity.

How many air freight forwarders used Electronic Data Interchange (EDI) to arrange and control air freight services in 1994?

Only 23 per cent of the respondents indicated that they used EDI in 1994.

Respondents using EDI had been doing so for an average of two years.

Fifteen per cent of EDI users reported that a portion of their shipments moved on an EDI-produced airline bill of lading; seven per cent moved more than 65 per cent of their traffic in that manner.

CANADIAN BUSINESS TRAVELLERS SURVEY

The Agency's survey of the **Canadian Professional Sales Association** and the **North West Commercial Travellers' Association**, which have a combined membership of over 40,000, offers a valuable perspective on air passenger travel in Canada. This year's survey also reports on the attitudes of business travellers to rail passenger services in the Ontario/Quebec corridor.

Who answered the 1994 survey?

The responses represent the views of 839 members of the Canadian Professional Sales Association and 372 members of the North West Commercial Travellers' Association. Respondents are located across Canada and, on average, they made:

- eight business and two personal trips by air within Canada;
- four business and two personal trips by air to U.S. destinations; and
- two business trips and one personal trip by air to international destinations.

What scheduled airline was the most frequently used?

For trips within Canada, the respondents flew most often with Air Canada; Canadian Airlines was their second choice of carrier.

On transborder routes, respondents preferred Air Canada; Canadian Airlines, American Airlines and Delta were also used frequently.

Air Canada was also the first choice of most respondents when travelling to international destinations. Again, Canadian Airlines was also a popular choice.

Did respondents use charter airlines?

For travel within Canada, nine per cent of the respondents said they had flown with charter carriers. These travellers made, on average, two business trips and one personal trip.

Seven per cent of the respondents flew to the U.S. on charter flights and took, on average, one business trip and one personal trip.

Charter services were used by six per cent of the respondents for their international travel. They made, on average, one business trip and one personal trip.

Did air travel patterns change from 1993 to 1994?

Respondents took an average of eight business trips within Canada, a slight decrease from the nine reported in 1993. The average number of domestic leisure trips remained the same at two.

The proportion of business trips taken by respondents outside of Canada has grown from negligible levels six years ago to over 27 per cent of the total in 1994, up from 24 per cent in 1993.

Which airports did they usually fly out of and where did they usually go?

Most respondents flew out of Toronto. Main centres such as Montreal, Vancouver, Calgary, Edmonton, Winnipeg and Halifax were also popular departure points.

The most popular domestic routes were Montreal-Toronto and Toronto-Vancouver.

When flying to destinations in the U.S., respondents flew most often from Toronto or Montreal to Chicago and New York as well as to Florida sunspots such as Miami, Orlando and Fort Lauderdale. Los Angeles, Boston and Atlanta were other popular U.S. destinations.

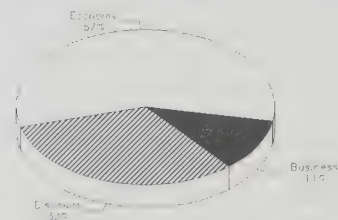
International flights from Toronto and Montreal to London, Paris and Frankfurt were mentioned most frequently. Several respondents said they flew to Hong Kong.

Thirteen per cent of the respondents reported that, on average, they crossed the Canada-U.S. border twice in the last 12 months to board a flight at a U.S. airport for a trip to another U.S. city or to an international destination.

What fares did respondents use?

Over half of business travellers flying within Canada flew economy class, 32 per cent flew discount and 11 per cent travelled business class.

Figure 3.7
Commercial Travellers
Air Fare Usage 1994



Source: Agency's Canadian Business Travellers Survey

Table 3.9
Air Fare Usage

	1991	1992	1993	1994
Fare Class	% of respondents			
Business	16	13	12	11
Economy	54	51	54	57
Discount	30	36	34	32

Source: Agency's Canadian Business Travellers Survey

First class seats were seldom purchased for flights to either transborder or international destinations. While nearly a quarter of respondents did pay extra to fly business class when travelling internationally, over a third flew on discount fares.

Economy fares were more popular with those travelling within Canada and to the U.S. than with those travelling internationally.

What was the most unacceptable fare restriction placed on discount fares?

The Saturday night stay-over appeared to be the most unacceptable restriction placed on discount fares.

To qualify for a discount fare, respondents said they had to stay at their destination on a Saturday night on about 60 per cent of their business trips in the last year.

How do fares used in 1994 compare with survey results in previous years?

Use of business class fares has declined steadily from 16 per cent in 1991 to 11 per cent in 1994.

Use of economy fares went up to 56 per cent from 54 per cent in 1993.

Despite a drop in the use of discount fares in 1994 to 32 per cent from 34 per cent in 1993, there has been a shift over the last few years from business or full economy class to discounted fares.

What factors are the most important to business travellers?

When travelling on business, respondents said their choice of airline depended mostly on availability of direct flights, arrival and departure times, the airline's safety record and fares.

Those making personal trips said air fares were by far the most important factor; however, they also considered the carrier's safety record and the availability of direct flights.

A carrier's safety record appeared to be a more important factor in 1994 than in previous years. In 1993, safety was ranked last among the factors considered by respondents both for leisure and business travel. The 1994 survey results show safety as one of the most important considerations ranking second and

fourth for personal and business travel respectively.

How was the overall quality of air service in 1994?

On the whole, respondents were satisfied with the services they received on domestic, transborder and international routes and said service had not changed much from the previous year.

Respondents were less than pleased with the cost of travelling, particularly on business or economy class fares.

Most said fares had gone up in the last 12 months.

Have travel budgets changed in the last 12 months?

Sixty-one per cent of respondents said that their travel budget had not been reduced, while 39 per cent reported a cut in their travel allowance.

Of those reporting reduced travel budgets, cutbacks prompted many to take fewer trips, while a third said they travel on cheaper fares.

How did people travel between cities?

For both business and personal inter-city travel, the car was the primary mode of transport.

Respondents travelled by air more frequently on business travel than for personal travel.

Only one per cent of respondents used the train for either business or personal reasons.

Did the respondents change the method of travel or their way of maintaining business contacts in the last year?

One-third of business travellers reported switching from air transport to another means of travel.

Of the respondents who said they had changed to another mode of transport, 79 per cent said they drove their car in place of flying, 19 per cent took the train and one per cent turned to bus travel.

Only ten per cent said that they had switched to air from another mode of transport. Of this small percentage, 87 per cent switched from automobile, 12 per cent from rail and one per cent from bus.

Over half of the respondents said that they had used other methods to keep in contact with their clients; about one-third kept in touch by phone, 29 per cent used fax machines and many contacted their clients at trade shows and used courier services.

Were respondents able to take advantage of Frequent Flyer Programs?

Over three-quarters of the respondents participated in a Frequent Flyer program.

Air Canada's and Canadian Airlines' programs were the most popular, but a number of respondents participated in programs offered by American carriers.

A few respondents had joined programs of international carriers such as LOT Polish Airlines, Japan Airlines and KLM.

Over half of the respondents said they had cashed in their bonus points in the last year, mostly to get free trips.

Fifty-five per cent said they would trade in these programs for lower air fares.

Did they or their company negotiate any confidential contracts with an airline to reduce travel costs?

Ninety-six per cent said they had not entered into any confidential contracts with airlines.

Of the four per cent who reported that a contract had been arranged, the majority said that their company had negotiated the agreement.

Did they highlight any domestic or transborder markets where air services should be added or improved?

Respondents spoke strongly on behalf of their regions, identifying a number of services that they felt were lacking.

Many said domestic and transborder service to and from Atlantic Canada needs improving. A frequent suggestion from Atlantic Canada was for more service from Halifax to points in New England.

A number of respondents felt that domestic and transborder service from western airports such as Edmonton, Regina and Saskatoon required improvement.

In fact, respondents all across Canada suggested expanded transborder service to U.S. cities such as Chicago, Boston, Minneapolis and New York.

How did respondents feel about air services in general?

On the whole, respondents seemed satisfied with the air service offered by carriers.

Most comments concerned the cost of travel, particularly for business.

Many felt that those travelling on business class should receive better service as a reward for paying more.

How often did respondents from Ontario and Quebec use the train?

Respondents who travelled by rail in 1994 said they took, on average, four business and two personal trips within Canada.

They also took an average of three business trips and one personal trip to destinations in the U.S.

What could the railways do to attract more business?

Most said that they would travel more by rail if there was faster service, i.e., faster trains.

An expanded network and better scheduling would also be incentives.

A number commented that better terminal locations might encourage them to consider rail transport.

Finally, respondents said that VIA Rail needs to work harder to promote its services.

Where did they travel by train?

The most popular route was Montreal-Toronto.

Toronto-Ottawa and Montreal-Ottawa were also well-travelled routes.

A few respondents said they took the train for travel both to and within the U.S.

How did respondents feel about rail passenger travel?

There was no real consensus about rail passenger service.

Some respondents who travelled by rail were pleased with the service, while others complained.

A number of respondents said they would never travel by train no matter what type of rail passenger services was available.

NORTHERN AIR SURVEY

In northern communities, transportation involves special needs and concerns, especially in remote areas located long distances from supply points. This section reports the findings of the Agency's Northern Air Survey that reviews transportation developments and issues affecting shippers and travellers in the North.

Who answered the Northern Air Survey?

Survey participants included 120 northerners representing communities, native organizations and bands, and the North West Company and Arctic Co-operatives Limited, which operate in northern and remote communities.

How often did northerners fly in 1994?

Respondents reported making an average of six business trips and one personal trip within the North, and an average of five business trips and two personal trips to/from southern Canada.

How did respondents rate air passenger services in their community in 1994 compared to 1993?

Most respondents noted little change in the quality of passenger services.

Service characteristics such as frequency, availability of seats, on-time performance, seat reservations, baggage handling and the number of flight cancellations were all rated "satisfactory" by the majority of respondents.

Most respondents were dissatisfied with air fares and said that the price of air travel had gone up in 1994.

How did shippers rate air cargo services in their community?

Shippers were generally satisfied with the air cargo services.

They said carriers were reliable and provided frequent and convenient cargo services.

Air transport freight rates drew polarized responses: the number of responses expressing satisfaction was equal to those expressing displeasure/dissatisfaction.

Were there other modes available for the shipment of cargo?

It appears that most of the respondents' communities had access to other modes of transport.

Two-thirds of respondents said that the rates charged by air carriers were not competitive with those of other modes.

Did use of air services change in 1994?

About half of the respondents said that they had travelled more frequently by air, a result of increased business.

The one-third who said they used air transport more often to ship freight cited higher demand for their products as the main reason.

How many respondents used charter air services?

Sixty-one per cent had travelled on charter carriers.

For more than half of those, charter flights accounted for less than ten per cent of their flights.

Did carriers replace jet service with non-jet service?

Most respondents said that airlines had not replaced jet service by non-jet service to their community in 1994.

Over half of the respondents who reported a loss in jet service were uncertain about how the change affected either cargo or passenger service in their community.

About one-quarter said that the introduction of non-jet service had been a positive move for both cargo and passenger services.

Did air carriers make an effort to upgrade their services in 1994?

Over a third of the respondents were unaware of any changes in aircraft providing service to their community.

Another third said that carriers made no effort to upgrade their fleet in the past year.

The remaining respondents said that the airlines serving their communities had made new acquisitions.

Where did they travel?

The most popular routes within the North appeared to be Yellowknife-Iqaluit and Inuvik-Yellowknife.

Both Yellowknife and Iqaluit were the most frequent origins or destinations for those travelling within the North.

Yellowknife-Edmonton and Iqaluit-Ottawa were the most frequently

travelled routes between northern and southern Canada.

Edmonton appeared to be the focal point for much of the traffic between the North and southern Canada.

What fares did respondents use?

Almost three-quarters of the respondents purchased standard economy fares for travel within the North.

When travelling between northern and southern Canada, respondents were more likely to fly on a discount fare.

Business and other must-go travellers indicated that they were particularly unhappy with prebooking and Saturday night stay-over restrictions on discount fares.

How many respondents said that they had negotiated confidential contracts with airlines in 1994?

Nearly one-quarter of the respondents said that they entered into a confidential contract with an air carrier; 30 per cent reported that they had not. The remainder voiced no opinion.

Were respondents able to take advantage of Frequent Flyer Programs?

Almost three-quarters of the respondents participated in such a program.

Most participants were members in Canadian Airlines' Canadian Plus program; Air Canada's Aeroplan was the second most popular plan.

Most respondents had not cashed in their Frequent Flyer bonus points in the last year, but those who did

usually exchanged their points for free travel.

Seventy-five per cent of respondents said that they would be willing to give up Frequent Flyer programs if they could get lower fares.

What did respondents think of northern air services?

Most respondents who commented on northern service were concerned about the cost of air travel.

Many said that passenger fares and cargo rates were excessively high in the North compared to prices in southern Canada.

A few commented on local issues involving the airports in their community; many were particularly concerned about the impact of the new National Airports Policy on levels of service, safety and rates/fares.

AIR TRANSPORTATION



Highlights of 1994

Industry Recovers In 1994

Air Canada posted net income of \$129 million in 1994, a \$455 million improvement from 1993.

PWA Corporation's net loss of \$37.8 million was a \$254 million improvement over 1993.

Affiliates of Air Canada and Canadian Airlines reported a combined net income of \$3.1 million for the first nine months of 1994, an \$11.2 million improvement over the same period in 1993.

Major Airlines Positioned for Future Growth

Air Canada announced orders for two new aircraft types and started taking delivery of its Canadair Regional Jets in September. It also signed new commercial agreements with British Midland and All Nippon Airways and commenced service to Seoul, South Korea and Osaka, Japan.

PWA Corporation finalized its restructuring plan and its alliance with American Airlines. Canadian Airlines International Ltd. moved its United Kingdom flights from Gatwick and Manchester to Heathrow, reintroduced non-stop service to China

and commenced coordinated service with Vietnam Airlines to Ho Chi Minh City.

Charter Carriers

Air Transat, Canada 3000 and Royal increased their domestic charter services. Five new large jet charter carriers were licensed in 1994 but two had ceased operations by year-end.

Traffic

Passenger traffic for Air Canada and Canadian Airlines increased 4.1 per cent from 1993 while their affiliates' traffic improved four per cent for the first three quarters of 1994. Domestic charter passenger traffic for the first three quarters was up 26 per cent from 1993.

Air Fares

Yields improved as average air fares rose.

Government Initiatives

The Government of Canada announced a new National Airports Policy, its intention to commercialize the air navigation system and a new international air transportation policy in 1994. It also signed a new air services agreement with the United States on February 24, 1995.

REGULATORY ENVIRONMENT

National Airports Policy

Transport Canada currently owns, operates or subsidizes 150 of the 726 certified airports in Canada. In July 1994, the federal government announced a National Airports Policy (NAP) based on a community-based management model. Under the policy, Canada's 26 busiest airports, which handle a large majority of all enplaned/deplaned air passengers and cargo in Canada and which form the National Airports System (NAS), will be commercialized. The federal government will retain ownership of the airports but will enter into long-term leases with local Canadian Airport Authorities (CAAs) which will be responsible for their financial and operational management.

The Minister of Transport announces a new National Airports Policy.

Five of these airports, Calgary, Edmonton, Montreal (Mirabel and Dorval) and Vancouver had been previously leased to local airport authorities. If any of the remaining NAS airports are not transferred to local authorities within five years, they will continue to be operated by the federal government but with a zero deficit.

In December 1994, the Minister of Transport officially recognized local airport authority groups in Winnipeg and Toronto. In January 1995, a group in Ottawa was recognized. Negotiations on transferring the airports at these communities from

Table 4.1
National Airports System

	Total Enplaned/Deplaned All Levels of Service (January-June, 1994)	
	Revenue Passengers (000s)	Cargo (Tonnes)
1. Toronto/Lester B. Pearson, Ont.	9,419	145,658
2. Vancouver, B.C.	4,758	74,425
3. Montreal - Dorval & Mirabel, Que.	3,903	52,907
4. Calgary, Alta.	2,222	21,208
5. Ottawa/MacDonald-Cartier, Ont.	1,206	3,525
6. Winnipeg, Man.	1,064	11,121
7. Halifax, N.S.	1,062	8,848
8. Edmonton, Alta.	326	85
9. Victoria, B.C.	626	6,531
10. Quebec/Jean Lesage, Que.	330	202
11. St. John's, Nfld.	290	2,437
12. Saskatoon/J.G. Diefenbaker, Sask.	246	780
13. Regina, Sask.	246	713
14. Thunder Bay, Ont.	216	420
15. Kelowna, B.C.	142	191
16. London, Ont.	139	—
17. Prince George, B.C.	124	202
18. Moncton, N.B.	108	1,801
19. Sudbury, Ont.	92	—
20. Fredericton, N.B.	91	49
21. Saint John, N.B.	90	111
22. Yellowknife, N.W.T.	86	1,111
23. Charlottetown, P.E.I.	74	57
24. Whitehorse, Y.T.	49	348
25. Gander, Nfld.	46	—
National Airports System Total	26,955	332,010
Total Canada	30,068	340,601

Source: Statistics Canada

Transport Canada to the CAAs are expected to continue until late 1995/early 1996. Preliminary discussions on the transfer of airports in other communities are also under way with interested parties.

The federal government will also cease its ownership of or involvement in the operation of an additional 71 regional and local airports during a five-year period starting April 1, 1995. The government will, however, create the

Airports Capital Assistance Program to assist the operators of these airports with safety-related capital projects. Also, operational assistance may be available to a new operator for more than five years if warranted.

Thirty-one small airports that do not have scheduled air services will cease to receive federal funding after March 31, 1997, or upon being transferred to local interests. The government is also negotiating the transfer of nine Arctic airports to the government of the Northwest Territories and is awaiting the Yukon government's decision on entering into similar transfer negotiations for two other Arctic airports in its jurisdiction. If any of these airports are not transferred to their respective territorial governments, they will be included in the appropriate NAP category and dealt with accordingly. In addition, 13 remote airports will continue to receive federal assistance.

The federal government will continue to set safety and security standards at all airports.

Commercialization of the Air Navigation System

The government also announced that it will continue to work toward commercialization of the air navigation system (ANS). At year-end, a decision had not been announced on the management structure but there was wide support for a not-for-profit organization. Transport Canada would continue to be responsible for the safety of the ANS system.

International Air Transportation Policy

On December 20, 1994, the federal government announced a new Canadian international air transportation policy which is designed to provide a more competitive international air transport environment. The policy adopts a "use it or lose it" approach for international route rights gained through negotiations with foreign governments.

New Canadian international air transportation policy announced.

Under this policy, any Canadian carrier may apply to the Minister of Transport for designation to operate in countries where the currently designated carrier is either not operating or is "under-utilizing" the designation. (Under-utilized is defined as instances where a Canadian carrier is operating less than twice a week, direct, i.e. same-plane, year-round service with its own aircraft or, if it is providing service via a commercial agreement with a foreign carrier without using its own aircraft for a significant portion of the schedule, is not providing daily, or near daily service during peak periods.) If a Canadian carrier is interested in providing service to a country with which Canada does not have an air agreement, the government will undertake to negotiate one.

On March 10, 1995, the Minister of Transport announced that, subject to the results of future bilateral negotiations, applications from Canadian air carriers for second-carrier designation on international

routes will be granted in markets with at least 300,000 one-way origin-destination passengers. Designations under this policy are

The Minister of Transport announces second-carrier designation criteria.

expected before the end of 1995. If a market is already served by two Canadian carriers, no applications by additional carriers will be considered until the market has grown significantly. Also, this policy does not apply to Canada-U.S. markets which are subject to the new "Open Skies" agreement.

In the future, if foreign carriers express an interest in providing service to any point in Canada (other than Toronto) and if no Canadian carrier expresses an interest in serving the market and the Canadian community concerned supports the application, the foreign carrier will be entitled to provide up to two weekly service.

The government also proposed to protect consumers from misleading service representations by: (1) moving to regulate computer reservation systems to ensure that the full range of travel service information is available to travel agents in a clear and neutral manner; (2) undertaking to **not** grant operating licences to international charter carriers that fail to meet financial requirements whose objective is to provide reasonable assurances that new licensees can fulfil their flight obligations to consumers; and (3) not allowing

such carriers to pre-sell services prior to obtaining a licence.

Canada-U.S. Air Transport Agreement

On February 24, 1995, after over two years of negotiations, the Prime Minister and the President of the United States signed a new air transport agreement in Ottawa. Under this "Open-Skies" agreement, Canadian carriers immediately gain unlimited route rights from any point in Canada to any point in the U.S. U.S. carriers also gain unlimited route rights immediately between points in the U.S. and Canada with the exception of Toronto, Montreal and Vancouver. At these three cities, all existing U.S. carrier route rights continue uninterrupted but all new passenger services by U.S. carriers to these points will be phased-in over a three-year period. Table 4.2 indicates the number of U.S. carriers that may be allocated two new daily flights for each year of the phase-in period by the U.S. government.

Table 4.2
Number of U.S. Carriers Allowed Extra Flights
During Phase-In Period

	Year 1	Year 2	Year 3	Year 4
Toronto	2	2	4	open
Montreal	6	6	open	open
Vancouver	6	6	open	open

Source: Transport Canada

The agreement also provides 14 additional daily slots at New York's LaGuardia Airport, for a total of 42, and ten additional slots at Chicago's O'Hare Airport, for a total of 36 in the summer and 32 in the

winter. (Two slots are required for each flight, one for landing and one for departing.) Air Canada's existing slots at these airports are protected. In March 1995, the Minister of Transport allocated six slots at O'Hare and ten slots at LaGuardia to Canadian Airlines International Ltd. (Canadian Airlines) and four slots at both O'Hare and LaGuardia to Air Canada.

The Open Skies Agreement removes restrictions on air travel between Canada and the U.S.

Canadian carriers are subject to the same system of slot allocation as U.S. carriers and, therefore, are able to purchase additional slots at other slot-controlled airports, including Washington National. U.S. carriers are prohibited from introducing non-stop service from Washington National to points in Canada until a Canadian carrier starts operating to this airport.

Carriers will continue to operate charters as they have in the past under "country of origin" rules or, based on their marketing judgement, may choose to operate scheduled services. The Government of

Canada plans to introduce new regulations that will liberalize transborder charter air services originating in Canada.

The agreement also allows for unrestricted transborder cargo service by Canadian and U.S. carriers between any point in Canada and the U.S. with the exception of new services by U.S. carriers to Toronto, Montreal and Vancouver, which are subject to a one-year phase-in period. All restrictions regarding aircraft size and package size on existing U.S. all-cargo service licences were removed. Carriers are prohibited from providing all-cargo service with aircraft exceeding 35,000 pounds to more than one destination in the other country for courier companies.

Pricing freedom accorded Canadian and U.S. carriers under Open Skies.

Under the agreement, Canadian and U.S. carriers are free to set their own fares for transborder services, subject to market forces, and no longer have to file their prices with Canadian and U.S. regulatory authorities. Prices may be disallowed only if the authorities of both countries agree to do so for reasons such as predatory or monopolistic pricing.

During the three-year phase-in period, the agreement restricts code-sharing between U.S. and Canadian carriers on flights carrying code-shared passengers between Toronto, Montreal or Vancouver and any U.S. point behind or beyond a U.S. gateway point. Canadian and U.S.

carriers' code-sharing rights are not restricted for traffic carried on other transborder segments, on connecting services in Canada or to/from a third country beyond Toronto, Montreal or Vancouver, provided both carriers are authorized to provide the service. Code-sharing with third country carriers is subject to normal regulatory requirements and to the discretion of both aeronautical authorities.

Cabotage is prohibited, i.e., carriers of one country are prohibited from carrying traffic between points in the other country.

The agreement also includes a three-phase dispute resolution provision. First, either side may request consultations for any matter covered by the agreement. Second, either side may then refer a matter to their Ministers (or their designates) for a "High-Level Meeting" to try to resolve the issue before sending it to an arbitration panel, the third level. The panel would consist of three members, one each from Canada and the U.S. and one member from a third country. In addition to preparing a report on its findings and whether or not there has been a violation of the agreement, the panel could also make recommendations, if both parties agree.

Computer Reservation System Regulations

After the Gemini Computer Reservation System was dissolved in November 1993 and after extensive consultations with the airline and travel industries, Transport Canada published proposed Computer Reservation System (CRS) regulations in the *Canada Gazette* in

January 1995. The goal of the new regulations is to ensure that all participating carriers receive fair and neutral presentation in any CRS operated in Canada. This mirrors a July 1989 code of conduct mandated by the Competition Tribunal when it sanctioned the merger of the Air Canada and Canadian Airlines reservation systems into the Gemini CRS. The maximum penalties for non-compliance with the regulations is set at \$5,000 for individuals and \$25,000 for companies.

Accessibility Regulations

On January 1st, 1994 the first set of accessibility regulations came into force. They specify the services air carriers have to provide to travellers with disabilities. The regulations cover Canadian air carriers operating domestic services with aircraft of 30 or more seats.

Regulations on training requirements for employees and contractors of rail, air and marine carriers and terminal operators under federal jurisdiction (with the exception of small air carriers and small airport operators) were also implemented in January 1994. Carriers and terminal operators were given until January 1995 to ensure that their employees and contractors, who provide transportation-related services to persons with disabilities, are properly trained. This training includes sensitivity training for all employees who deal with the public and specific training for staff who offer more specialized services such as wheelchair transfers.

Consultations continued on a draft set of regulations on reduced air fares for attendants of persons with

disabilities. This proposal was published in the *Canada Gazette* in September 1993. The final version is now waiting for Governor in Council approval.

Two sets of regulations on the accessibility of equipment used by air carriers and on the equipment used by rail carriers are being reviewed by the Privy Council Office (Justice) prior to publication for further comments in Part I of the *Canada Gazette*.

Work continued on other initiatives, namely: terms and conditions of carriage of persons with disabilities by rail and small aircraft, marine accessibility equipment, and communication of information.

Agency Activities in the Designated Area

In 1994, the Agency investigated 24 complaints that domestic air carriers had operated in violation of the *NTA, 1987* and the *Air Transportation Regulations (ATRs)* in the designated area. (See Figure 4.14.) Infractions included operating under a name not included in a licence, operating without proper licensing authority, and base and route protection violations. Almost half of the complaints were under investigation at the end of the year. While the majority of the remaining offenders received a written warning from the Agency, in a few cases, Transport Canada revoked the carrier's Operating Certificate or the file was referred by the Agency to the R.C.M.P. for prosecution.

Federal Legislation Governing the Air Industry

- *Aeronautics Act & Air Regulations*
- *Airport Transfer Act*
- *Canadian Transportation Accident Investigation and Safety Board Act*
- *Carriage by Air Act*
- *Department of Transport Act*
- *National Transportation Act, 1987 and Air Transportation Regulations*
- *War Risks, Marine and Aviation Act*

Federal Ownership of Aviation Infrastructure

Airports, associated facilities, equipment, vehicles and supporting systems

Aircraft, aviation facilities, navigation systems, communications equipment, RAMP, CAATS, surveillance systems, and other related equipment

Federal Air Transport Budgets/Expenditures* (\$000)

TRANSPORT CANADA	
AVIATION	
Air Navigation Systems	710,147
Aviation Regulation	84,174
Aviation System Safety	5,846
Aircraft Services	48,419
Direction & Administration	21,240
Total Aviation	869,826
AIRPORTS	383,701
CIVIL AVIATION TRIBUNAL	890
NATIONAL TRANSPORTATION AGENCY	5,663
TRANSPORTATION SAFETY BOARD	9,440
Total	1,270,620

* Excluding subsidies

Source: 1994-95 Main Estimates

Federal Air Transport Subsidies (\$000)

TRANSPORT CANADA	
AVIATION	
Other governments and International Agencies	450
Flying Clubs & Air Cadets	96
Total Aviation	546
AIRPORTS	
Municipal/Local Airport - Operation	13,974
- Establish/Improve	19,200
Other	4,925
Total Airports	38,099
Total	38,645

Source: 1994-95 Main Estimates

Air Canada and Canadian Airlines alone account for over two-thirds of all passenger and freight revenue earned by Canadian air carriers while their affiliates account for an additional 12 per cent. The rest of the industry consists of several large jet charter carriers, independent regional airlines and numerous smaller air carriers operating in a variety of domestic and international markets.

Revenues/Recoveries on Federal Services to the Air Transport Industry (\$000)

AVIATION

Air Navigation Systems	41,365
Regulatory Services	1,221
Aviation Services	16,511
Air Transportation Tax	543,819
Total	602,916

AIRPORTS

Rentals/Concessions	130,031
Landing Fees	75,360
Terminal Fees	41,890
Other	37,721
Total	285,002

Total Aviation & Airports 887,918

Source: 1994-95 Main Estimates

Air Canada

Air Canada and its connectors are the largest carrier network in Canada. Air Canada's Connectors include Air Alliance, AirBC, Air Ontario, Air Nova and NWT Air. In October 1994, Air Canada increased its ownership in both Air Ontario and Air Alliance from 75 per cent to 100 per cent and in February 1995, the air carrier announced that it was acquiring all remaining shares in AirBC.

Also in 1994, Air Canada announced its intention to sell NWT Air to an employee group, which will purchase two-thirds of the company. A group of northern business people will own the other third. The minority shareholders are associated with Arctic Frontier Carriers Ltd., a licensee of the NWT Motor Transport Board that is authorized to provide bus service in the Northwest Territories. NWT Air will continue to operate as an Air Canada

INDUSTRY STRUCTURE

Two large air carrier networks centred on Montreal-based Air Canada and Calgary-based Canadian Airlines continue to dominate Canada's air transportation industry.

Connector if the application is not disallowed by the Agency.

***Air Canada
consolidates its stakes
in three Connectors
but moves to divest its
holding in NWT Air.***

Air Canada also has, since April 1993, a minority interest in Continental Airlines Inc., which is based in Delaware, U.S., as well as interests in other airline-related businesses. Air Canada's tour operator, Touram Inc., which does business under the name Air Canada Vacations, provides charter flights to tourist destinations. (see Figure 4.1)

PWA Corporation

In April 1994, PWA Corp. announced it had completed its restructuring plan and had entered into a comprehensive services agreement with AMR Corporation. (AMR is the parent company of American Airlines of Dallas, Texas).

***PWA Corp. completes
its restructuring plan
and enters into a
services agreement
with AMR
Corporation.***

The plan included a C\$246-million investment by AMR Corp. (through Aurora Investments) in Canadian Airlines and a 20-year contract for services provided by AMR's subsidiaries. AMR gained two seats on Canadian Airlines' board, 25 per

cent of voting shares and additional non-voting shares. Canadian Airlines' employees made wage concessions of \$200 million in exchange for common shares of PWA Corp. Lenders, lessors, vendors and certain creditors accepted common shares in exchange for the revaluation of some contracts and obligations.

Canadian Airlines owns Time Air, Ontario Express and Inter-Canadien outright through its subsidiary Canadian Regional Airlines Limited. Canadian Regional also holds 45 per cent of Calm Air. Canadian North, which serves northern Alberta, Manitoba, Quebec, Newfoundland and the Northwest Territories, is an operating division of Canadian Airlines. At the end of 1994, Canadian Airlines' 45 per cent stake in Air Atlantic was being held in escrow for distribution to employees of Air Atlantic and third party investors. Canadian Airlines also owns Canadian Holidays, a tour operator specializing in tour programs on charter flights to leisure destinations, and Transpacific Tours (Canada) Limited, which markets and provides ground transportation services for overseas visitors to Canada.

***Air Atlantic seeks
bankruptcy protection.***

Air Atlantic sought court protection from creditors on May 10, 1994. In accordance with a restructuring plan, a new company, Air Atlantic (1995) Ltd., was formed which acquired substantially all of the assets of Air Atlantic, including aircraft and hangar leases. The shareholders of Air Atlantic (1995) Ltd. consist of Craig Dobbin Ltd. (16 per cent); an

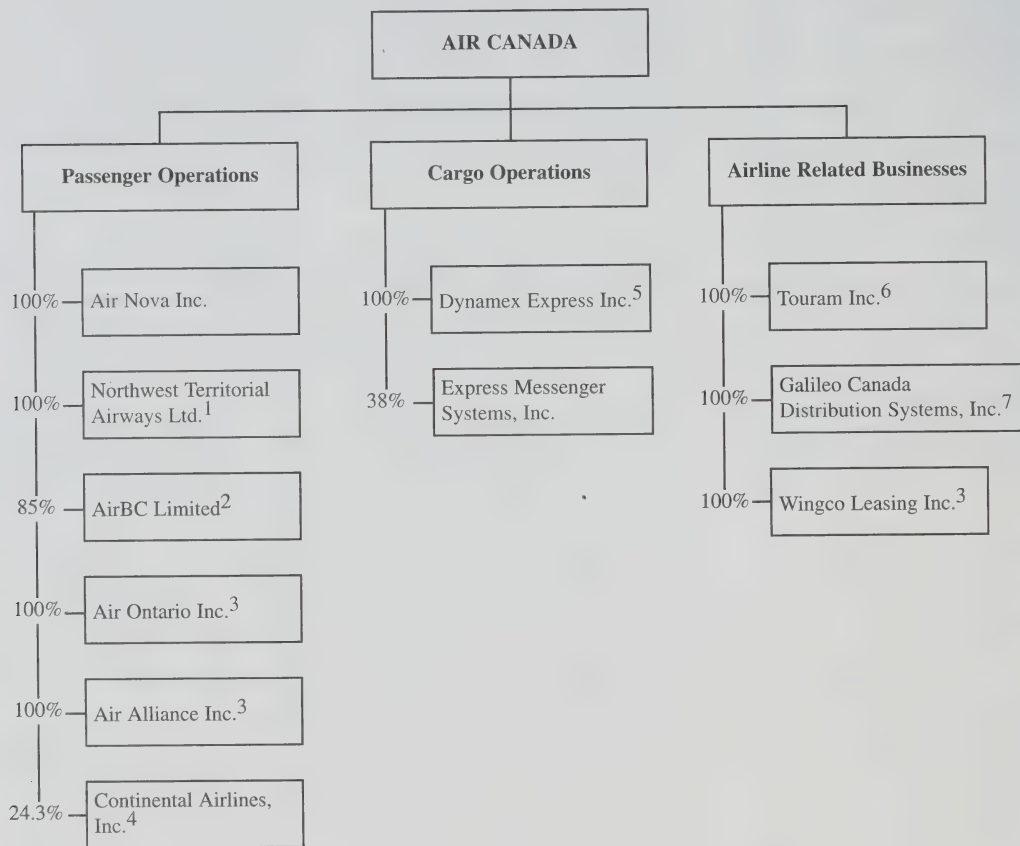
Air Atlantic employee-owned company (14 per cent); and certain secured creditors of Air Atlantic, namely British Aerospace Regional Aircraft Ltd. of London, England; Canada Life Assurance Company; and Confederation Life Insurance Company (together holding 70 per cent).

Since 45 per cent of the shares would be held by British Aerospace Regional Aircraft Ltd., the Minister of Transport granted Air Atlantic (1995) Ltd. a limited conditional exemption from the domestic ownership requirements of the NTA, 1987 until October 31, 1995. By that date, the airline must demonstrate to the Agency that it meets the ownership requirements of the NTA, 1987, i.e. that at least 75 per cent of its voting interests are owned and controlled by Canadians. The Minister has stated that the exemption will not be extended. Air Nova, Air Canada's regional affiliate in the Atlantic Provinces, opposed the proposed acquisition on the grounds the acquiring company did not meet Canadian ownership requirements.

Gemini Dispute Resolved

The long dispute over Canadian Airlines' withdrawal from Gemini, the CRS owned jointly by Air Canada, PWA Corp. and Covia Canada (a unit of UAL Corp., United Airlines' parent company), ended in January 1994. Air Canada, Gemini and Covia agreed to drop all litigation against PWA Corp. — and vice-versa — and to allow Canadian Airlines to transfer its CRS business to AMR Corp.'s Sabre. Air Canada created Galileo Canada Distribution Systems, Inc. to take over Gemini's

Figure 4.1: Air Canada Corporate Structure



¹ An application to sell Northwest Territorial Airways Ltd. to employee and outside investor interests is being reviewed by the Agency.

² Air Canada increased its stake in AirBC Limited from 85 per cent to 100 per cent in February 1995.

³ Indirectly held through a wholly-owned holding company which owns 100 per cent of the common shares of Air Ontario, Air Alliance and Wingco Leasing Inc. In October 1994, Air Canada acquired the 25 per cent interest in the holding company it did not own. Wingco Leasing leases regional aircraft to Air Canada's regional affiliates.

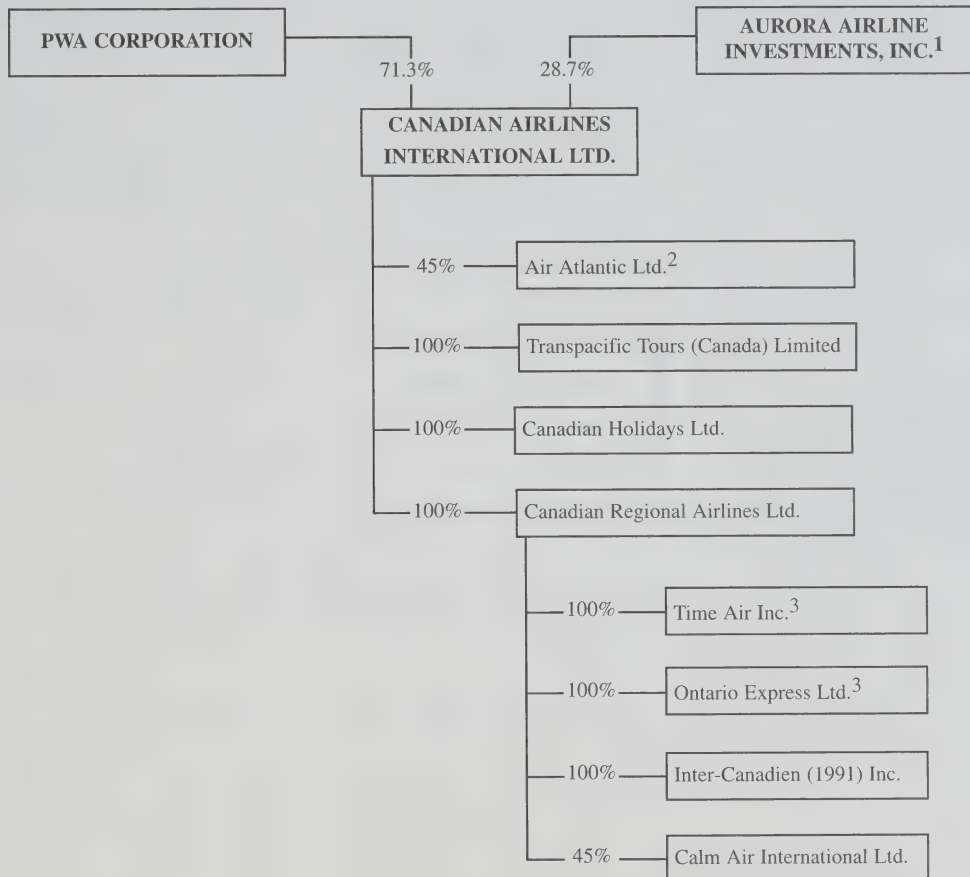
⁴ Air Canada holds 24.3 per cent of the voting interest and 19.6 per cent of the common equity of Continental Airlines, Inc.

⁵ Air Canada has signed a letter of intent to sell its interest in Dynamex Express, which is held by a wholly-owned subsidiary.

⁶ Touram Inc. carries on business under the name of Air Canada Vacations.

⁷ Galileo Canada Distribution Systems, Inc. was formed in 1994 to take over The Gemini Group's Computer Reservations System business.

Figure 4.2: PWA Corporation Corporate Structure



¹ Aurora Airline Investments, Inc. is an indirect wholly-owned subsidiary of AMR Corporation.

² On February 1, 1995, the 45 per cent interest in Air Atlantic, which had been held in escrow, was transferred to third parties after being approved by the Newfoundland Supreme Court and the Agency. Air Atlantic continues to operate as a Canadian Partner.

³ Time Air Inc. and Ontario Express Ltd. carry on business jointly as Canadian Regional Airlines.

C.R.S. business. Air Canada's and Gemini's computer assets, services and telecommunications network were transferred to Advantis Canada, a wholly-owned subsidiary of IBM Canada, for \$50 million and a seven-year services contract.

Independent Air Carriers

Air Transat is part of a fully integrated travel and tour enterprise, Transat A.T. Inc., which owns in whole or in part, tour operators Vacances Air Transat/Air Transat Holidays, Regent Holidays, and Les Voyages Nolitoir Inc. plus the Tourbec travel agency chain, the Consultour/Club Voyages travel group and the Services Haycot airport ground handling company. Transat A.T. offers a full range of travel-related services including retail travel agency services, travel packages and air transportation.

Canada 3000 Airlines Limited (Canada 3000) is a privately-held carrier that offers its charter services to tour operators who market flights to Europe, sunspot and domestic destinations.

First Air and Air Inuit are owned by Makavik Corporation based in Kuujuaq, Quebec. Both carriers provide extensive scheduled and charter services to various points in northern Quebec, the Northwest Territories and Greenland with a fleet of B-727s and various turbo-prop aircraft.

Royal, established on January 6, 1992, is a division of Royal Aviation Inc. The airline offers its charter services to tour operators including Royal Vacances Inc., a wholly-owned subsidiary, and Sunquest

Vacations Limited, which co-owns one of the Lockheed L-1011s operated by Royal.

Advance Air Charter, based in Calgary, specializes in international charters in support of the Alberta oil and gas industry.

These operators of large jet aircraft were joined in 1994 by several carriers who proposed to operate large jet aircraft in both domestic and international markets.

Several operators of large jet aircraft commenced service in 1994.

Air Club International, based in Montreal, began flying in June out of Vancouver and Toronto to the traditional charter territory of Europe in summer and sunspot destinations in the winter.

Montreal-based Fortunair started operations in late June of 1994 but, after a disagreement with tour operator Caribe Sol, stopped flying in August. The airline returned its B-747 aircraft to the lessor pending the restart of operations with a smaller airplane; its licence was suspended in January 1995.

Atlantic Island Airways began operations out of Summerside, P.E.I. in September 1994 to domestic destinations throughout the Atlantic region and as far west as Toronto, with a single 65-seat Fokker F-28. The airline operated until December, when its aircraft was grounded for mandatory maintenance reasons. Its licence was also suspended in January 1995.

Canair Cargo Inc., a domestic and transborder air cargo operator, was licensed in August 1994 to offer a domestic air service and to operate international charters with B-737 aircraft.

Sky Service, a wholly-owned subsidiary of Sky Service F.B.O. Ltd., began operations with two A-320s in October 1994.

Toronto-based Trans Capital Air commenced operations in 1994 with a single Dash-7 turboprop aircraft.

Air Carriers and Licences

Air Carriers

During 1994, the Agency licensed 55 domestic air carriers to provide air services in southern Canada and issued licences to 40 domestic carriers authorizing them to operate to, from or within northern Canada (which also allows them to operate in the southern sector). One Canadian carrier was authorized to provide international scheduled services, nine new Canadian carriers were authorized to provide international charter service and 29 Canadian licensees were authorized to provide both domestic and either international scheduled or charter services. In addition, two foreign carriers were licensed to offer international scheduled service to Canada while 75 foreign carriers were authorized to operate international charters to or from Canada.

Two notices of proposed acquisitions were filed with the Agency in 1994, including the proposed reorganization of Air Atlantic and the proposed sale of NWT Air by Air Canada to employee and investor interests.

Table 4.3
**Air Carriers Holding Agency Licences:
 December 31, 1993 & 1994**

	1993	1994
Canadian Carriers Holding		
Domestic Licences only	498	505
International Licences only	6	7
Domestic and International Licences	<u>429</u>	<u>458</u>
Total Canadian Carriers	933	970
Foreign Carriers		
U.S.A.	811	834
Other International	<u>98</u>	<u>99</u>
Total Foreign Carriers	909	933

Source: National Transportation Agency

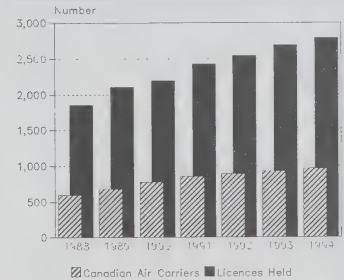
Table 4.4
Air Transport Licences: December 31, 1993 & 1994

	1993	1994
Domestic Licences		
Southern Canada	934	958
Northern Canada		
Scheduled	45	44
Non-Scheduled	<u>1,124</u>	<u>1,193</u>
Total Northern Canada	1,169	1,237
Total Domestic Licences	2,103	2,195
International Licences		
Held by Canadian Carriers		
Scheduled	121	121
Non-Scheduled	<u>464</u>	<u>472</u>
Total Canadian Held	585	593
Held by Foreign Carriers		
Scheduled	164	167
Non-Scheduled	<u>1,003</u>	<u>995</u>
Total Foreign Held	1,167	1,162
Total International Licences	<u>1,752</u>	<u>1,755</u>
Total Licences	3,855	3,950

Source: National Transportation Agency

There were 12 bankruptcy filings during the year by Canadian air carriers authorized to provide scheduled and/or charter air service. The Agency also granted 191 requests to cancel domestic and international licence authorities held by Canadian carriers. At year-end, there were 970 licensed Canadian carriers, compared to 933 at the end of 1993.

Figure 4.3
**Canadian Air Carriers
 and Canadian Held Licences**



Source: National Transportation Agency

In addition, 933 foreign air carriers were providing service to and from Canada at the end of 1994; an increase of 24 from the end of 1993. The majority (834) were U.S.-based air carriers.

Licences

In December 1994, Canadian air carriers held 2,788 domestic and international licences, up from 2,688 in December 1993. The number of international licences held by foreign carriers decreased slightly from 1,167 at the end of 1993 to 1,162 in December 1994. Table 4.4 shows the distribution of air transport licences issued by the Agency.

SERVICE

Air Canada

Air Canada had a very busy year in 1994 as it ordered and took delivery of new aircraft, initiated service to new destinations, negotiated new international alliances and introduced new products and services.

Before the peak 1994 summer period, Air Canada reintroduced into service three L-1011s that had been in desert storage. By deploying the aircraft on the Montreal-Toronto-Vancouver and Toronto-Los Angeles routes, other aircraft became available to provide needed extra capacity on Air Canada's Pacific routes until the A-340s are introduced into the fleet.

Air Canada embarks on a multi-billion dollar fleet expansion and renewal program.

Air Canada announced its order of six long-range Airbus A-340-300s plus options for three additional aircraft. Delivery of the A-340s is scheduled for late 1996 and 1997. Air Canada also negotiated the lease of two additional A-340s for delivery in May 1995 pending delivery of its own aircraft. The A-340s will be deployed on Air Canada's Canada-Osaka, Japan service.

In May 1994, Air Canada signed a letter of intent to acquire 25 A-319s to replace its 35 DC-9s. Airbus Industries is to arrange 100 per cent financing of the aircraft. However, Air Canada will not immediately remove the DC-9s from service as the A-319s are delivered but intends

Table 4.5

Air Canada's Fleet Composition

1993	1994	On Order
34 A-320s	34 A-320s	6 A-320s ¹
3 B-747-100s	3 B-747-100s	6 A-340-300s ²
3 B-747-200s	3 B-747-200s	6 Canadair RJ ³
3 B-747-400s	3 B-747-400s	25 A-319 ⁴
21 B-767-200s	21 B-767-200s	5 B-767-300ERs ⁵
1 B-767-300ER ⁶	1 B-767-300ER	
5 DC-8s (all cargo) ⁷	35 DC-9s	
35 DC-9s	5 ⁸ L-1011-100s	
5 L-101-100s ⁹	4 Canadair RJ ³	
110	109	

¹ Were forward sold for delivery in 1997 and 1998.

² Deliveries scheduled for late 1996 and 1997; Air Canada has options for three additional aircraft.

³ Deliveries of first ten firm orders commenced in September 1994; Air Canada has options for 38 additional aircraft.

⁴ Twenty-five firm orders with options for an additional ten aircraft; deliveries scheduled for December 1996 and 1997.

⁵ Originally scheduled for delivery in 1993 and 1994, the deliveries were deferred in 1992 until 1996 and 1997 but, in 1994, were advanced to commence in October 1995; options for five additional aircraft.

⁶ Wet leased to Polynesian Airlines.

⁷ A contract had been signed to sell all five aircraft to DHL.

⁸ Three reintroduced into service in 1994, one being used for spare parts and one leased to a third party.

⁹ Four in desert storage; and one leased to a third party for four years.

Source: Air Canada

to keep them in the fleet. Some DC-9s may be sold at a later date while others may be operated beyond 1996 in transborder services. These aircraft will require major maintenance work and hush kits to permit operations in transborder markets beyond the year 2000.

Air Canada also started taking delivery of its new Canadair Regional Jets in September; the first 24 aircraft (including 10 firm orders and 14 options) are being delivered at the rate of one-a-month.

Air Canada has been actively expanding its global network by introducing new services and by expanding its strategic alliances with major international air carriers. Air Canada commenced service to Seoul, South Korea in May 1994 and, after being designated by the Minister of Transport in January 1994, to Osaka, Japan in September.

Air Canada added to its list of alliances with foreign carriers when it negotiated a commercial agreement with British Midland. The agreement enables the two carriers to code-share flights

between Canada and five points in the United Kingdom (Belfast, Edinburgh, Glasgow, Leeds-Bradford and Teeside) via London's Heathrow airport. Air Canada will also offer code-shared flights to Brussels from Toronto and Montreal with British Midland starting in June 1995.

Air Canada and All Nippon Airways (ANA) announced their intention to expand their existing commercial agreement into a comprehensive strategic alliance. The new agreement enables the two carriers to co-ordinate schedules and operations to facilitate the interlining of passengers and freight, particularly at Osaka, Japan to/from other points in Japan and Asia. The agreement also permits the two carriers to do joint advertising, develop and promote joint tour packages, allow mutual participation in each other's frequent flyer program, and share facilities and passenger handling in jointly served cities.

While Air Canada ended its code-sharing arrangements with Lot Polish Airlines in December 1994 and with CSA Czechoslovak Airlines in January 1995, it still interlines traffic with both carriers.

Air Canada's other code-sharing services include Amman - Royal Jordanian; Caracas - Viasa; Kingston and Montego Bay - Air Jamaica; Madrid - Iberia; Paris - Air France; Seoul - Korean Air and Zurich - Swissair. In addition, Air Canada also has commercial and/or marketing agreements with Cathay Pacific, Continental Airlines, El Al Israeli Airlines, Finnair, Pakistan International Airlines, and United Airlines.

Air Canada has clearly set its course for expansion in international and transborder markets. Its 1995 international summer schedule includes: (1) increased capacity on trans-Atlantic and trans-Pacific routes; (2) the introduction of a new service to the Middle East when twice-weekly B-767-300 service between Toronto and Israel commences in June 1995; (3) the introduction of service to Brussels, first via code-shared flights with British Midland and then with its own B-767-300s in November; and (4) the introduction of Toronto-Madrid service with Air Canada aircraft which will supplement the code-shared flights operated with Iberia to both Montreal and Toronto. In contrast, Air Canada suspended service to Lyon and Nice, France in March 1995.

*Air Canada's
expansion plans aided
by the Open Skies
Agreement and
changes to Canada's
international air
transport policy.*

Following the signing of the Open Skies agreement between Canada and the United States, Air Canada announced an ambitious program to bolster its transborder service over the next 18 months. In March 1995, Air Canada commenced twice-a-day, non-stop A-320 service between Toronto and Atlanta and then added two additional Canadair RJ frequencies in April.

In March 1995, Air Canada's growth strategy received a boost when the

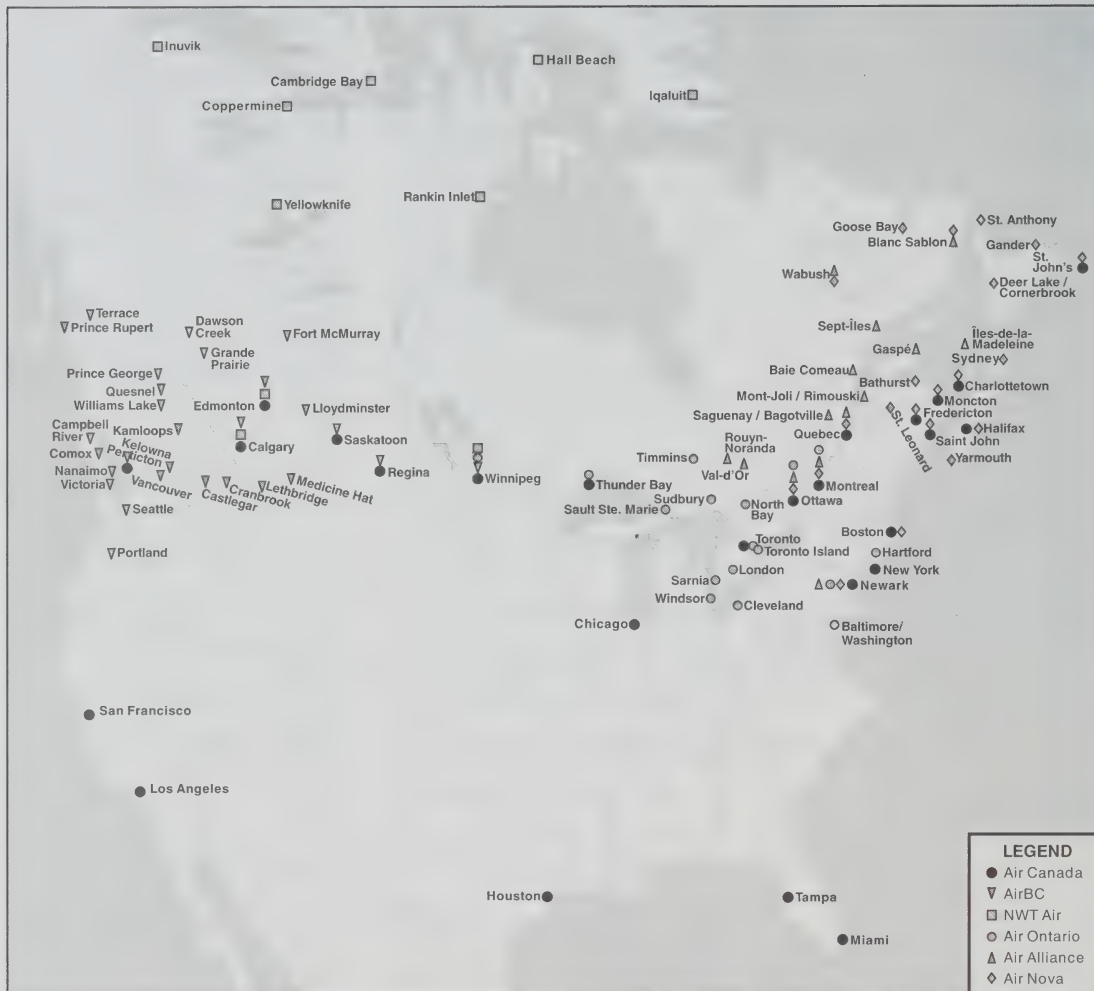
Minister of Transport awarded four additional slots to Air Canada at both Chicago (O'Hare) and New York (La Guardia) and announced the criteria for determining second carrier designation on international routes. After bilateral air negotiations conclude in 1995, Air Canada will gain access to Hong Kong, a route that will make a significant contribution to Air Canada's international traffic and revenues in the future. The March announcement also paves the way for the introduction of service by Air Canada between western Canada and Germany.

In a move designed to win over international business travellers, Air Canada replaced First Class service on its international flights with Executive First, a service which features extra wide sleeper seats, 55 inch pitch and entertainment and phone-fax units at each seat. Air Canada also introduced its Day Tripper service between Toronto and London. These frequencies arrive at London by mid-evening to help minimize the effects of jetlag on travellers.

In January 1995, Air Alliance announced the suspension of service between Quebec City and Boston, but introduced Quebec City-Newark flights in February. Air Nova commenced Saint John-Newark non-stop flights in June and announced in December that it had agreed in principle to enter into a commercial agreement with Provincial Airlines which would allow co-ordination of schedules in Newfoundland and Labrador.

Figure 4.4

Air Canada's North American Destinations



AIR CANADA'S OTHER INTERNATIONAL DESTINATIONS

Scheduled and Code-shared

- Europe:** Belfast, Berlin, Dusseldorf, Edinburgh, Frankfurt, Glasgow, Helsinki, Leeds-Bradford, London, Lyon, Madrid, Manchester, Nice, Paris, Teeside, Vienna, Zurich
- Caribbean:** Antigua, Barbados, Bermuda, Freeport, Guadeloupe, Havana, Haiti, Kingston, Montego Bay, Nassau, St. Lucia, Trinidad and Tobago, Varadero
- South America:** Caracas
- Asia:** Delhi, Osaka, Seoul
- Middle-East:** Amman

Charter (in addition to points covered under scheduled operations)

- U.S.A.:** Fort Myers, Ft. Lauderdale, Grand Junction, Honolulu, Las Vegas, Maui, Myrtle Beach, Orlando, West Palm Beach
- Caribbean:** Aruba, San Juan, St. Maarten
- Mexico:** Cancun, Puerto Vallarta

Figure 4.5
Canadian Airlines' North American Destinations



CANADIAN AIRLINES' OTHER INTERNATIONAL DESTINATIONS

Scheduled and Code-shared

Europe:	Frankfurt, London, Milan, Paris, Rome
Central & South America:	Buenos Aires, Mexico City, Rio De Janeiro, Santiago, Sao Paulo
Asia and Pacific:	Auckland, Bangkok, Beijing, Hong Kong, Melbourne, Nadi, Nagoya, Shanghai, Sydney, Taipei, Tokyo
Charter (in addition to points covered under scheduled operations)	
U.S.A.:	Daytona Beach, Fort Myers, Ft. Lauderdale, Las Vegas, Orlando, Palm Springs, Phoenix, Reno, Sarasota, St. Petersburg, West Palm Beach
Caribbean:	Bridgetown (Barbados), Ciego De Avila, Grand Cayman, Holguin, Montego Bay, Nassau, Puerto Plata, Punta Cana, Santiago de Cuba, St. Kitts, San Juan, Varadero
Mexico & Central America:	Acapulco, Cancun, Manzanillo, Mazatlan, Puerto Vallarta, San José (Costa Rica), San José del Cabo (Mexico)

Canadian Airlines

PWA Corporation and its subsidiary, Canadian Airlines, made a number of changes in 1994. PWA Corporation finalized its restructuring plan and its employees became shareholders while Canadian Airlines introduced new aircraft into service and commenced new services.

Canadian Airlines leased two new A-320s in February as part of a deal with an Irish leasing company. The aircraft had been ready for almost a year but delivery was delayed as both PWA Corp. and the lessor underwent financial restructuring.

In November 1994, PWA Corp.'s Board of Directors approved the addition of a fourth Boeing 747-400 to Canadian Airlines' fleet in the spring of 1995 on condition that it dispose of an existing B-767-300 to help finance the acquisition. The new B-747 will be deployed on Canadian Airlines' Vancouver-Hong Kong, Vancouver-Taipei and Vancouver-Tokyo routes.

Canadian Airlines

takes steps to increase capacity.

Canadian Airlines subsequently announced, in March 1995, its intention to continue leasing the B-767-300ER and to lease two additional DC-10-30 aircraft. The three aircraft will be used on services between Montreal, Toronto, Calgary and Halifax and will free-up narrow-body aircraft which can be deployed on new U.S. services. The increase in domestic capacity for the summer of 1995 follows Canadian Airlines' decision to bolster its domestic

Table 4.6

Canadian Airlines' Fleet Composition

1993	1994	On Order
10 A-320s	12 A-320s	10 A-320s ¹
45 B-737-200s	44 B-737-200s ²	
2 B-737-200s (all cargo)	2 B-737-200s (all cargo)	
3 B-737s ³	3 B-737s ³	
3 B747-400s	3 B-747-400s	
11 B-767-300ERs	11 B-767-300ER	
8 DC-10-30s	8 DC-10-30s	
82	83	

¹ Scheduled for delivery between 1996 and 2000.

² Includes seven aircraft assigned to Canadian North.

³ Leased to America West Airlines.

Source: Canadian Airlines

capacity for the 1994/95 winter period and signals Canadian Airlines' intention to win back domestic market share from Air Canada and the charter carriers.

The addition of these aircraft to Canadian Airlines' fleet was made possible by an agreement between the carrier and its unions, which agreed to more flexible work rules and other changes, thereby enabling Canadian Airlines to increase flights without having to hire additional employees.

Canadian Airlines also has expanded its international route network through a series of commercial alliances and code-sharing agreements with other international carriers. Currently, it has agreements with Lufthansa (Frankfurt), Qantas (Sydney and Melbourne), Air New Zealand (Auckland, Nadi), Mandarin Airlines (Taipei) and Varig Brazilian Airlines (Buenos Aires, Sao Paulo, Santiago and Rio de Janeiro).

Canadian Airlines reintroduced twice-weekly non-stop service to Beijing, China in May and then added Shanghai, China to the service in October. The airline had suspended service to both cities in 1989. Also in October, Canadian Airlines and Vietnam Airlines initiated coordinated B-767 service from Toronto to Ho Chi Minh City, Vietnam via Charles de Gaulle airport in Paris.

Canadian Airlines commenced daily non-stop Toronto-London (Heathrow) service. This service offers improved connections and has won customer acceptance due to Heathrow's proximity to London's business district. Canadian Airlines is also increasing its service on the Toronto-Mexico City route from daily A-320 flights to twice daily B-737 flights. However, due to low demand, Canadian Airlines suspended flights to Munich from Toronto for the winter 1994-95 period and then decided against

reintroducing this service in its summer 1995 schedule.

Canadian Airlines to benefit from the Open Skies Agreement and a new international air transport policy.

The Minister of Transport's March 1995 announcement will also aid Canadian Airlines' growth plans. In his announcement, the Minister awarded Canadian Airlines ten slots at New York (LaGuardia) and six slots at Chicago (O'Hare) airports and designated Canadian Airlines as the Canadian carrier to serve Malaysia, Vietnam and the Philippines. The announcement also paves the way for Canadian Airlines to provide service between Eastern Canada and Germany.

Following the announcement, Canadian Airlines announced plans to commence service to New York and Chicago from Toronto and between Chicago and Vancouver. A key element of Canadian Airlines' plans to expand into the U.S. market is its intention to work closely with American Airlines (American) in developing traffic on these and a number of other Canada-U.S. routes served by American. If it gains government approval, Canadian Airlines will code-share with American on these and other routes beyond American's U.S. gateways. In addition, Canadian Airlines also intends to take advantage of the opportunity under the Open Skies Agreement to begin new scheduled services on a number of transborder routes which it previously served on a charter basis. Canadian Airlines is

now well positioned to benefit from its alliance with American and to develop new trans-Atlantic and trans-Pacific markets.

Canadian Airlines withdrew from Saskatoon and Regina, which then received expanded service from Canadian Regional. Canadian Airlines also announced plans to discontinue service to Deer Lake, Wabush and Happy Valley-Goose Bay, Newfoundland and to have Air Atlantic move into these markets. However, the plan for service changes to Labrador failed to materialize when Air Atlantic filed for bankruptcy protection and then, in a bid to survive, applied to the Agency to end its service in October to Happy Valley-Goose Bay, Wabush and Churchill Falls, Labrador and its scheduled flights to Quebec City and the Îles-de-la-Madeleine. Canadian Airlines, therefore, continued its service to Wabush and Goose Bay while Air Labrador replaced the service to Churchill Falls.

Canadian North and Aklak Air, a subsidiary of the Inuvik-based Inuvialuit Development Corporation, signed a strategic alliance that extends Canadian North's service beyond Inuvik to the Western Arctic communities of Tuktoyaktuk, Sachs Harbour and Paulatuk. Aklak Air was previously aligned with NWT Air.

In October, Canadian Regional dropped service to Timmins and then, in November, began flying three times a day turboprop service between Toronto and Dulles Airport in Washington D.C. Inter-Canadien introduced three times a day Fokker F-28 jet service between Quebec City and Toronto.

Inter-Canadien commenced jet service to Quebec City, Sept-Îles and Wabush from Montreal after taking delivery of two Fokker F-28s in the fourth quarter of 1994 while Calm Air introduced its new SAAB 340B into service in January 1995.

Independent Air Carriers

Following the demise of Nationair in April 1993, this segment of the industry continued to be based on the big four operators of large jet aircraft, namely Air Transat, Canada 3000, First Air and Royal.

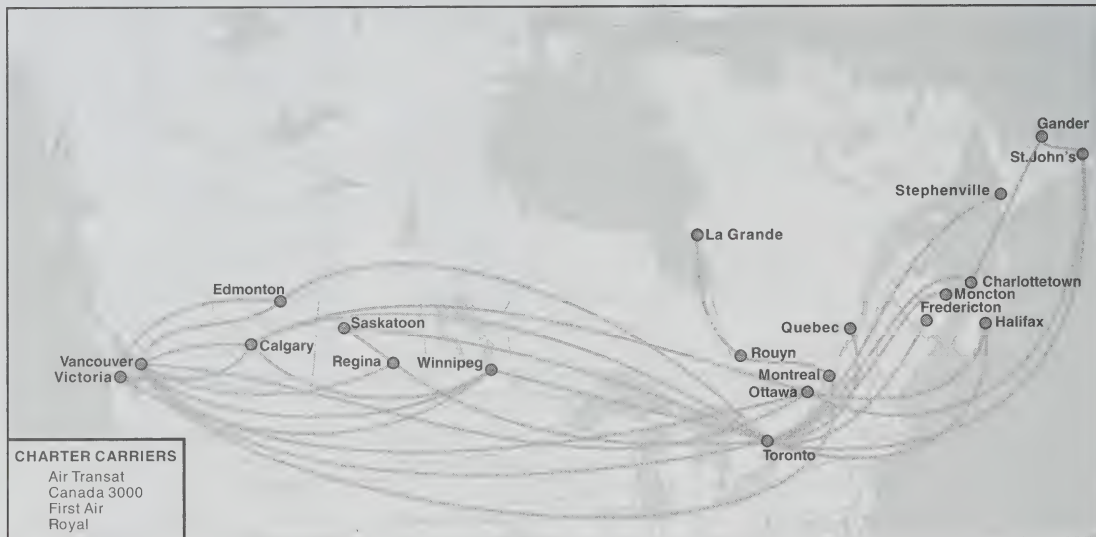
Air Transat continued to concentrate on international flights to sunspot destinations in the winter and Europe all year around, as well as offering a domestic charter program. It implemented a long term fleet plan by not renewing the leases on three Boeing 727s when they expired in the fourth quarter and by consolidating its fleet around four Boeing 757s and five Lockheed L-1011s.

Canada 3000 continued to offer charter flights to Europe and sunspot destinations as well as maintaining a large presence in the domestic market where it continued to be the key supplier of charter seats. In 1994, it operated up to 13 Boeing 757s and Airbus A-320s.

First Air flew fewer domestic passenger charter flights in 1994 than in 1993. Instead, it concentrated on providing scheduled and charter services with its combined all-freight B-727s to its traditional markets in northern Quebec and the Northwest Territories. First Air also continued

Figure 4.6

Domestic Charter Routes: 3rd Quarter, 1994



LARGE JET CARRIERS

Carrier	Points Served in 1994	1993 Jet Fleet	1994 Jet Fleet
Advance Air Charters	(Charters to international destinations)	1 Douglas DC-8-55 1 Douglas DC-8-62C	1 Douglas DC-8F-55
Air Club International	2 Domestic, 22 International	*****	1 Airbus A310-324 1 Boeing B747-200
Air Transat	10 Domestic, 59 International	3 Boeing B727-200s 6 Boeing B757-200ERs 5 Lockheed L-1011s	(3 Boeing B727-200s ¹) 4 Boeing B757-200ERs 5 Lockheed L-1011s
Atlantic Island Airways ²	6 Domestic	*****	(1 Fokker F-28)
Canada 3000	12 Domestic, 50 International	5/9 Boeing B757-200s ³ 3 Airbus A320s	5/9 Boeing B757-200s ³ 4 Airbus A320s
Canair Cargo Inc. ⁴	2 Domestic, 7 International	*****	1 Boeing B737-400 2 Boeing B737s (cargo)
First Air ⁵	5 Domestic, 1 International	3 Boeing B727-100s 1 Boeing B727-200F	3 Boeing B727-100Cs 2 Boeing B727-200F
Fortunair Canada Inc. ⁶	1 Domestic, 5 International	*****	(1 Boeing B747)
Royal	17 Domestic, 47 International	5 Boeing B727-200s 2 Lockheed L-1011s	7 Boeing B727-200s 2 Lockheed L-1011s
Sky Services	1 Domestic, 15 International	*****	2 Airbus A320s
TOTAL		39 jet aircraft	44 jet aircraft

¹ Air Transat's B-727 leases expired in the fourth quarter of 1994.² Operated briefly during the fourth quarter of 1994. Licence suspended February 9, 1995.³ Four B-757s join the fleet during the fall/winter period.⁴ Also operated eight turboprop aircraft.⁵ Also operated 18 turboprops and provided scheduled service to 23 domestic points and Kangerlussuaq, Greenland.⁶ Fortunair's licence was suspended January 19, 1995.

to provide transborder cargo services for Emery Worldwide.

Royal added two Boeing 727s to its fleet, flew to more international destinations, expanded into the Ottawa market and stepped-up its domestic activity in 1994. The carrier has stuck to its business plan of pursuing only those markets which make money, and using cash from operations to minimize debt levels.

Advance Air Charters operated a small passenger charter program to Europe in 1994 prior to disposing of its passenger DC-8 in the fall. It continues to operate a DC-8 freighter in support of the oil industry in western Canada.

1994 witnessed many changes in the independent air carrier industry.

During the last half of the year, five new carriers (Air Club International, Atlantic Island Airways, Canair Cargo, Fortunair Canada and Sky Services) entered the marketplace. However, before the end of the year, both Fortunair (following contractual problems with its tour operator) and Atlantic Island Airways (which had its sole aircraft grounded for mandatory maintenance reasons) had ceased operations. Both carriers' licences were suspended in early 1995.

Montreal-based Air Club International commenced charter operations in June with an Airbus A-310 out of Montreal and a Boeing

747 out of Vancouver. It is flying to points in the Caribbean, Europe, Central and South America and Ft. Lauderdale, Florida.

Mississauga-based Canair Cargo brought three B737s into the market, two of which are dedicated to cargo operations. It also entered into a multi-year agreement with a foreign carrier to operate a B-737-400 during the winter months and has plans to operate a similar type aircraft on passenger charters during the summer. During the 1994/95 winter season, it provided passenger charter service to destinations in the Caribbean, Mexico, and Venezuela and did some ad hoc charter work.

The other new entrant, Sky Service, operated two A-320s on international charters for Sunquest Vacations. Its winter program consisted of flights from Toronto to Las Vegas, Central and South America and the Caribbean.

At the end of the year, several other prospective licensees were at various stages of the regulatory process.

Cargo

Canadian Airlines continued to operate its overnight domestic all-cargo scheduled services in 1994. It utilized its B-737 freighter and combi-aircraft, in all-cargo configuration. It also provides significant belly capacity on its scheduled passenger flights.

After discontinuing its all-cargo DC-8 freighter operations on March 31, 1994, Air Canada continued to provide cargo service on its

passenger flights and with its B-747-200 and B-747-400 combi-aircraft to New Delhi, Seoul and Osaka (belly only). Despite the loss of the DC-8s, Air Canada's cargo revenues for 1994 were virtually unchanged from 1993 levels. This reflects the strength of the international air cargo markets at New Delhi, Seoul, and Osaka.

First Air continued to operate nightly Boeing 727-200 freighter charter flights to Dayton, Ohio for Emery Air Freight and added an important contract to provide nightly service for Emery from Vancouver and Calgary to Dayton, Ohio. In early 1995, First Air acquired an ex-Air Transat B-727-200 aircraft and is having it converted it to a combi-configuration. The carrier plans to then retire one of its older B-727s.

Regional and Inter-Regional Services

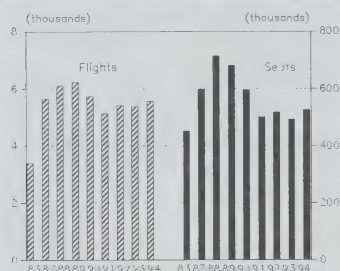
Published air schedules by air carriers for a one-week period during the third quarter were analysed for 159 domestic and 41 transborder city-pairs¹ to determine changes in the level of air service in various markets over the 1983 to 1994 period. The service indicators analysed include direct, indirect, jet, non-jet and total flights and total available seats.

Top Twenty-Five Domestic City-Pairs

After reducing services in 1993, Air Canada, Canadian Airlines and their affiliates moved to increase domestic capacity in 1994 as the domestic economy recovered. Third quarter service statistics reflect this change.

¹ A list of these routes is found in Appendix B.1.

Figure 4.7
Weekly Scheduled Flights and Seats,
Top Twenty-Five Markets, Third Quarter



Source: Official Airline Guides

Both total flights and seats for the top 25 city-pairs were up from 1993 levels. The increase in the number of flights reflects a shift to more direct flights with jet aircraft. Conversely, both indirect and non-jet flights for the sample routes were down from 1993 levels. While total seats and flights were higher than the levels reported for the comparable period during the previous three years, they were still below levels reported in 1987, the year preceding the official legislative reforms of the *NTA, 1987* which took effect on January 1, 1988, and the peak years 1988 and 1989, prior to the Gulf war and the onset of the recession.

Twenty of the top 25 city-pairs reported increases in flights while 19 reported increases in total available seats. The largest percentage increases occurred on Calgary-Ottawa (where Air Canada introduced B-767 service), Toronto-Vancouver (where Air Canada added B-767 and B-747 flights as part of its service to Seoul, South Korea and daily L-1011 service in a bid to win back market-share from its domestic competitors) and Ottawa-Toronto (which saw Air Canada and Canadian Airlines increase frequen-

Table 4.7

Changes in Weekly Scheduled Air Service - Top 25 Domestic Origin-Destination City-Pairs: Third Quarter 1993 and 1994

	Total Flights (Direct and Indirect)		Seat Capacity	
	Number	Per cent increase (decrease) from 1993	Number	Per cent increase (decrease) from 1993
Montreal-Toronto	581	4.5	62,204	9.9
Ottawa-Toronto	492	19.1	43,868	18.3
Toronto-Vancouver	263	24.6	53,201	27.3
Calgary-Vancouver	558	11.4	48,095	12.7
Calgary-Toronto	189	7.4	29,552	5.1
Toronto-Winnipeg	188	14.6	20,924	12.0
Calgary-Edmonton	435	(20.5)	33,918	(1.4)
Halifax-Toronto	212	5.0	23,183	(0.5)
Edmonton-Vancouver	253	(14.2)	21,087	(13.6)
Edmonton-Toronto	131	7.4	18,736	3.2
Vancouver-Victoria	542	1.7	20,272	15.0
Thunder Bay-Toronto	96	6.6	8,732	3.5
Montreal-Vancouver	93	6.9	12,756	11.9
Ottawa-Vancouver	75	23.0	8,569	15.8
Vancouver-Winnipeg	198	2.1	18,517	0.8
Calgary-Winnipeg	145	5.8	13,138	3.8
Pr. George-Vancouver	106	24.7	7,542	5.3
Halifax-Ottawa	115	7.5	9,211	(4.4)
Kelowna-Vancouver	170	0.6	7,969	7.7
St. John's-Toronto	72	12.5	7,755	9.4
Halifax-Montreal	203	(7.3)	14,004	(8.8)
Halifax-St. John's	246	3.4	18,581	1.0
Ottawa-Winnipeg	50	(13.8)	5,143	(26.8)
Calgary-Montreal	69	(21.6)	9,742	(16.2)
Calgary-Ottawa	69	25.5	9,013	37.0
Total	5,551	3.3	525,712	7.0

Source: Official Airline Guides

cies to Pearson Airport; Air Ontario add frequencies to Toronto Island and Air Laurentian begin non-jet service to Toronto-Buttonville airport).

Markets experiencing reductions in service included Calgary-Montreal, Edmonton-Vancouver, Ottawa-

Winnipeg, Halifax-St. John's and Calgary-Edmonton.

During the third quarter of 1994, the charter carriers, through tour operators, were actively selling seats in 15 of the top 25 city-pairs in Canada. Their planned capacity is not included in these data.

1994 Regional Air Service Highlights

Figure 4.8
Weekly Scheduled Flights and Seats
Western Provinces, Third Quarter

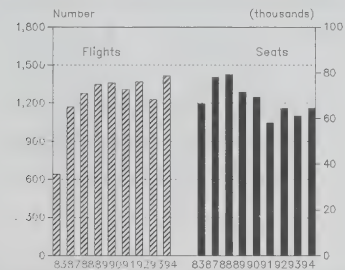
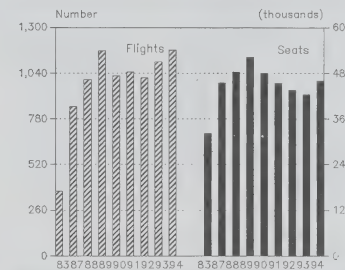


Figure 4.9
Weekly Scheduled Flights and Seats,
Atlantic Provinces, Third Quarter



- Third quarter 1994 total flights, direct flights and non-jet flights were up from 1993 levels in all regions of the country except Quebec while total available seats were up in all regions except Ontario and Northern Canada.
- The relatively large increases in total flights (15 per cent), direct flights (27 per cent) and non-jet flights (19 per cent) registered by the 21 sample routes in **Western Canada** and the six per cent increase in total seats, reflects increased utilization of non-jet aircraft to provide direct air service in the region.
- All 1994 service indicators for the 13 sample routes in **Atlantic Canada** were up over 1993 levels. The relatively larger percentage increase in total seats compared to total flights reflects the introduction of new services with larger aircraft, including jet services on some routes.
- The service indicators — total flights, direct flights, non-jet flights, and total seats — were down from 1993 levels for the 11 **Quebec** routes while indirect flights were up.
- For the 11 **Ontario** routes, total flights increased a modest 1.5 per cent while total seats increased by over eight per cent reflecting the utilization of larger turbo-prop aircraft like the 50 seat Dash 8-300 on some sample routes.

Figure 4.10
Weekly Scheduled Flights and Seats
Ontario, Third Quarter

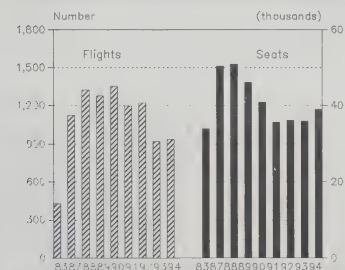


Figure 4.11
Weekly Scheduled Flights and Seats
Quebec, Third Quarter

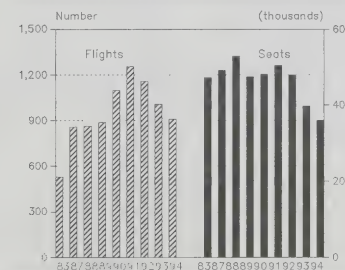
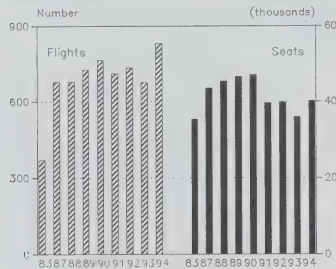
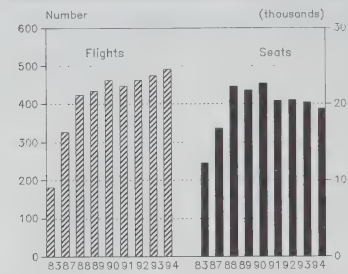


Figure 4.12
Weekly Scheduled Flights and Seats
North-South Services, Third Quarter



Source: Official Airline Guides

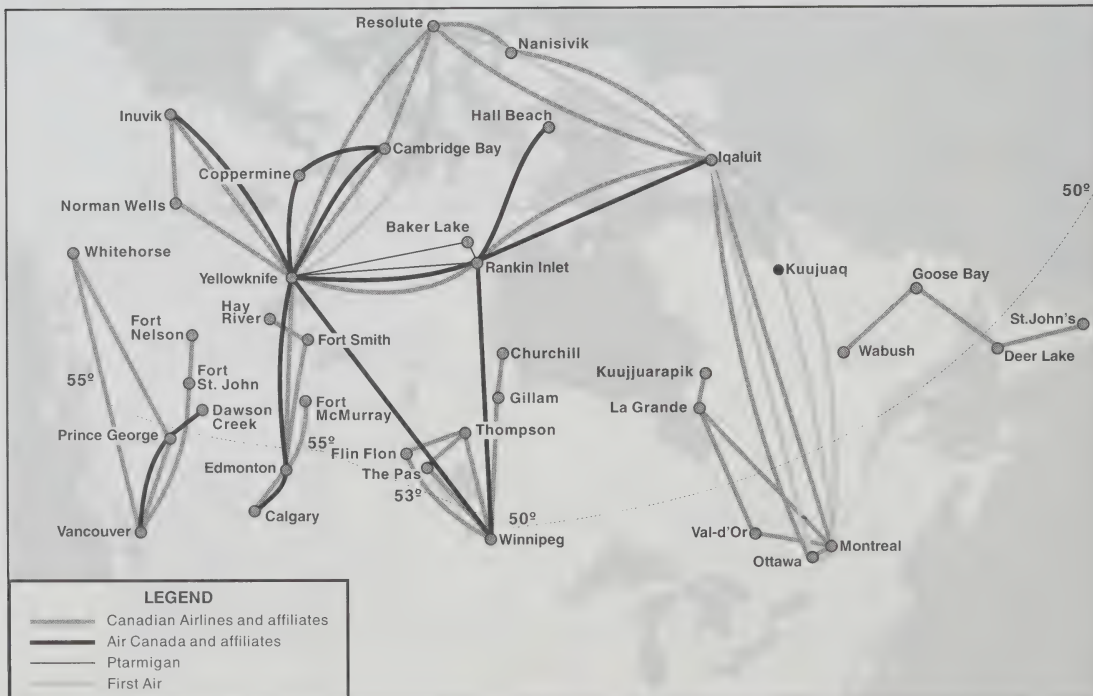
Figure 4.13
Weekly Scheduled Flights and Seats
Northern Area, Third Quarter



Source: Official Airline Guides

- Air services on the 24 **north-south** routes went up significantly from 1993 levels. Almost all of the additional flights were due to increased utilization of non-jet aircraft on both direct and indirect services. The result was a 12 per cent increase in available seats.
- For the 35 **northern** routes, the 3.4 per cent increase in total flights reflected an increase in indirect flights with non-jet aircraft and a 3.4 per cent decrease in jet flights. This resulted in a 4.1 per cent decline in total seats.

Figure 4.14
Northern Jet Routes: 3rd Quarter 1994



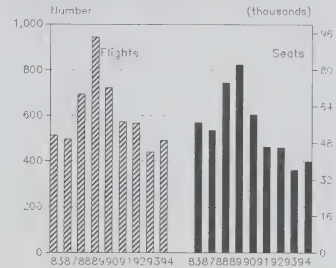
Inter-Regional Services

The 19 inter-regional sample markets which, in 1994, had slightly more direct than non-direct flights and about twice as many jet as non-jet flights, reported increases in total flights and seats of 11 per cent and ten per cent respectively over 1993 levels. This reflects an increase in the number of indirect flights (31 per cent) and in the use of jet aircraft (15 per cent) and a small (two per cent) reduction in direct flights. Of the 19 city-pairs, six had no change in the number of available seats while seven of the remaining 12 city-pairs reported increases and six reported decreases. The key new services introduced to these markets in 1994 were the introduction of new direct and indirect services by Air

Canada between Montreal/Ottawa and Edmonton, including daily return A-320 flights between Montreal/Ottawa and Edmonton and additional indirect B-767, A-320 and DC-9 services between Montreal and Edmonton and Ottawa and Edmonton.

These services resulted in the addition of over 5,800 seats to the market since 1993; the net increase in total seats for all 19 inter-regional city-pairs was only slightly more than 3,600 seats. In addition, charter carriers were active in three city-pairs in this sample (Toronto-Moncton and Saskatoon/Regina-Toronto) during the third quarter of 1994. Their planned departing seats are not included in this analysis.

Figure 4.15
Weekly Scheduled Flights and Seats,
Inter-Regional, Third Quarter



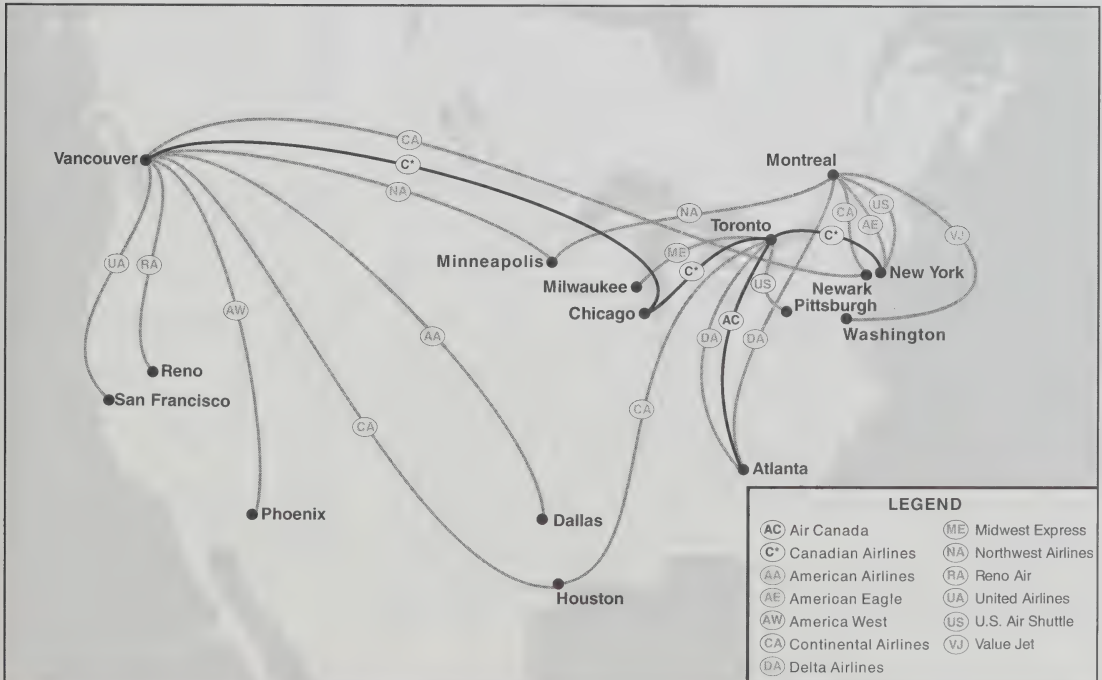
Source: Official Airline Guides

Transborder Services

The sample of 41 Canada-U.S. city-pairs includes most of the current major transborder city-pairs as well as many of the city-pairs which will have new air services in 1995 under

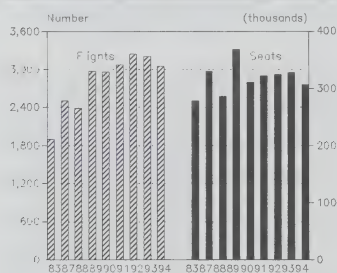
Figure 4.16

New Services Awarded Under Open Skies Agreement: 1st Quarter, 1995



the Open Skies agreement. Air services between Canada and the United States are expected to increase significantly in 1995 as both Canadian and U.S. carriers take advantage of the freer regulatory environment that now governs air travel between the two countries.

Figure 4.17
Weekly Scheduled Flights and Seats
Transborder Services, Third Quarter



Source: Official Airline Guides

Under the agreement, the Minister of Transport allocated slots at New York's LaGuardia and Chicago's O'Hare airports to Air Canada and Canadian Airlines. As a result, Air Canada will be adding two daily flights from Toronto to both LaGuardia and O'Hare while Canadian Airlines will be introducing five flights daily between Toronto and LaGuardia, two flights daily between Toronto and O'Hare and one flight between Vancouver and O'Hare. Both Air Canada and Canadian Airlines have indicated that they intend to introduce new transborder services in 1995. Both carriers are seeking government approval to code-share with their U.S. partners on transborder routes.

In addition, a number of U.S. air carriers plan to begin new

transborder services, including 17 new routes into Canada awarded to them by the U.S. Transportation Secretary under the Open Skies Agreement. Figure 4.16 shows the new transborder air services that have been awarded to Canadian and U.S. carriers by their respective governments under the Open Skies agreement. This map does not include several proposed services by Canadian carriers to airports in the United States that are not slot restricted or by U.S. carriers into Canada to non-restricted airports other than Toronto, Montreal and Vancouver.

Air services during the third quarter of 1994 on the 41 Canada-U.S. city-pairs declined from the corresponding period in 1993. The 4.7 per cent decline in total flights reflects a two per cent drop in jet flights and a 3.5 per cent decline in flights with non-jet aircraft. In turn, this brought about a 6.5 per cent decrease in total available seats.

FARES AND RATES

Discount Fares

The supply of discount fares on offer for 132 sample city-pairs was examined for the third quarter of 1994. The sample city-pairs¹ were divided into four sample groups: Top 25, Affiliates, Northern, and Other Mainline, Regional and Local Routes. For the full sample, the lowest generally available fares were discounted by an average of 53 per cent off the regular economy fares in 1994, more than the average of 49 per cent in 1993. Discounts of more than 45 per cent were offered

on over half (57 per cent) of the sample routes. Discounts greater than 60 per cent were available on some routes in all four of the sample groups.

Both the average discount rates and the number of discount fares available in 1994 were up over 1993 levels.

The average number of discount fares available per route increased from five in 1993 to nine in 1994. Each discount fare has different "fences" or rules, such as advance purchase or minimum stay requirements. In general, cheaper fares have more stringent rules. When the number of different discount fares goes up, it is usually a sign of increased competition, as airlines attempt to match fares without diverting more profitable traffic.

Statistics Canada's second quarter 1994 Fare Basis Survey data for the major carriers indicates that 66 per cent of domestic passengers travelled on discount fares, up from 61.6 per cent in 1993, but a 2.2 percentage point decrease from 1992. This was the first increase after five consecutive quarterly declines, discontinuing a trend which began in 1993. The average domestic discount fare (coupon basis) was \$153, a price increase of 0.9 per cent from 1993.

¹ A list of these routes is found in Appendix B.1.

The percentage of passengers who travelled in the second quarter on deep discount fares (i.e., fares discounted by 30 per cent or more off the economy fare) was 54.1 per cent, up 8.4 per cent from the 1993 figure of 45.7 per cent for the same period. This increase, which contrasts with the increase in average discount fares, suggests that the air carriers were effectively using their yield management systems to control the number of seats allocated to the most heavily discounted fares.

Top Twenty-five Routes

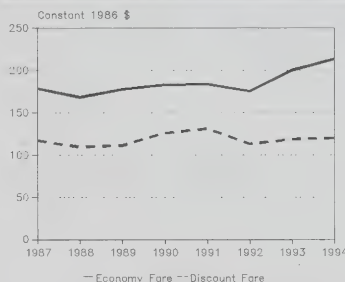
On the 25 most heavily travelled domestic routes¹, the lowest generally available fares were discounted by an average of 57 per cent off the regular economy fare, the largest discount of all four sample groups. Discounts ranged from 40 per cent, between Vancouver and Prince George, to 78 per cent between Sault Ste. Marie and Toronto. Eight of the 25 routes had discounts between 50 and 55 per cent, and nine offered discounts between 59 and 64 per cent.

Although the average number of available discount fares rose sharply in 1994, they were still below the levels attained in 1991.

The average number of discount fares offered rose sharply from an average of six per route in 1993, to 11 in 1994, but was still below the record of 14 in 1991. The largest

number of discount fares was on the Vancouver-Victoria route, where no fewer than 23 different discount fares were available. The increase in the number of discount fares offered on each route reflected, in part, increased competition from domestic charter carriers. However, in city-pairs where charter carriers were not a factor, such as Toronto-Montreal, the rise in the number of discount fares available shows pressure from other competitive forces.

Figure 4.18
Average Air Fares: Top 25 City Pairs,
Second Quarter 1987-1993



Source: Statistics Canada

According to Fare Basis Survey data for the top 25 domestic routes, in the second quarter of 1994, the average economy fare (in current dollars) increased by 6.8 per cent from the second quarter of 1993, while the average domestic discount fare rose by 1.5 per cent from the previous year. In constant dollars, the average economy fare increased by 6.5 per cent from 1993, and by 19.3 per cent since 1987. The average discount fare on these routes rose slightly by only 1.2 per cent since 1993 and by only 2.5 per cent since 1987 (see Figure 4.18). The proportion of passengers travelling on discount fares rose slightly, from 64 per cent in 1993 to 68.1 per cent in 1994. The

average discount fare on the top 25 routes was \$156.90, a 43.7 per cent discount off the average economy fare of \$278.80.

During the second quarter of 1994, the average economy fare increased 6.8 per cent while the average discount fare increased 1.5 per cent over 1993 levels.

Affiliate Carrier Routes

On the 30 sample affiliate carrier routes¹, the lowest generally available fares were discounted by an average of 51 per cent off the regular economy fare. The discounts ranged from a low of 22 per cent between Vancouver and Port Hardy, to a high of more than 82 per cent between Toronto and London (Ontario), the largest range of all four sample groups. Two-thirds of the routes had average discounts between 40 per cent and 50 per cent.

The average number of discount fares available increased from five per route in 1993, to nine in 1994, but was still below the 1990 record average of 13. The largest number of discount fares offered was 15, on the Montreal-Quebec City route.

Other Mainline, Regional, and Local Routes

In the sample of 42 mainline, regional and local routes¹, the lowest available fares were discounted by an average of 55 per cent. Discounts

¹ A list of these routes is provided in Appendix B.1

ranged from 28 per cent between Prince Albert and Saskatoon, to 79 per cent between Toronto and Timmins. On 25 of the 42 routes, the discount off the regular economy fare ranged between 44 per cent and 55 per cent.

The average number of discount fares per route doubled from five in 1993 to ten in 1994. The route with the largest number of discount fares was Montreal-Sept-Îles, with 17.

Northern Routes

On the 35 northern routes¹ sampled, the lowest available fares were discounted by an average of 49 per cent off the regular economy fare, the smallest average discount of all four sample groups. The discounts ranged from 30 per cent between Whitehorse and Yellowknife, to 69 per cent between La Grande and Montreal. Of all four groups, discounts on northern routes showed the narrowest range. For 16 of the city-pairs, the largest discount was between 42 and 46 per cent. Yet these statistics are still an improvement over 1993, when the average discount was 46 per cent and no city-pairs had discounts greater than 51 per cent.

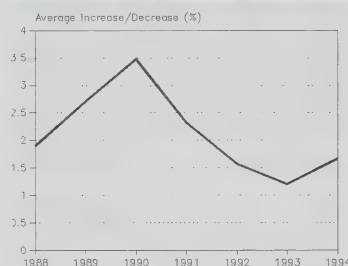
The average number of discount fares offered per route increased from four in 1993 to seven in 1994. The Quebec City-Wabush route offered the largest number of fares, giving a choice of no less than 20 different discount fares.

Cargo Rates

The Agency's Shippers Survey asked users of air cargo services to

compare their air cargo unit freight costs in 1994 with their costs in 1993 for the domestic, transborder and other international sectors. All three sectors recorded average rate increases greater than the 1.2 per cent average increase reported in 1993.

Figure 4.19
Changes in Domestic Air Cargo Rates
Reported by Air Shippers



Source: Agency's Shipper Survey

For domestic shipments, the 1994 average rate increase was 1.7 per cent. Fifteen per cent of the respondents reported rate increases of five per cent or more, while five per cent reported lower costs. Forty-eight per cent of the respondents noted no change in rates.

The weighted average reports of all shippers showed that air cargo rates between Canada and the U.S. rose by 2.3 per cent from 1993 to 1994. Almost 50 per cent of shippers indicated that there had been no change. Only 2.9 per cent of respondents reported lower transborder air cargo rates.

The situation was much the same between Canada and other international points, the average rate increase being 2.2 per cent. Nearly 49 per cent of responding shippers

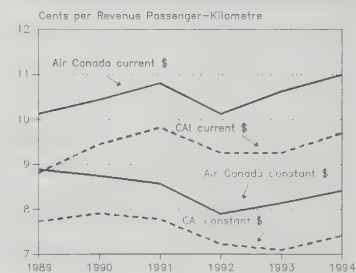
indicated that there had been no change in cargo rates. However, 17 per cent reported increases of five per cent or more, while six per cent reported that their rates had gone down.

Air cargo is crucial to northern and remote communities. Results of the Northern Air Survey indicated that 15 per cent of respondents had no access to any mode of cargo transportation other than air. Sixty-seven per cent of respondents in communities with alternatives to air transport indicated that air cargo rates were not competitive with other modes. Forty-two per cent reported an increase in cargo rates. Although these figures are a slight improvement over 1993, they continue to show the ongoing dissatisfaction of northern residents with the cost of air transport in the North.

Yield

Total passenger revenue per passenger-kilometre (or per passenger-mile) is commonly referred to as yield. This measure reflects the net results of the system-wide fare mix of all passengers

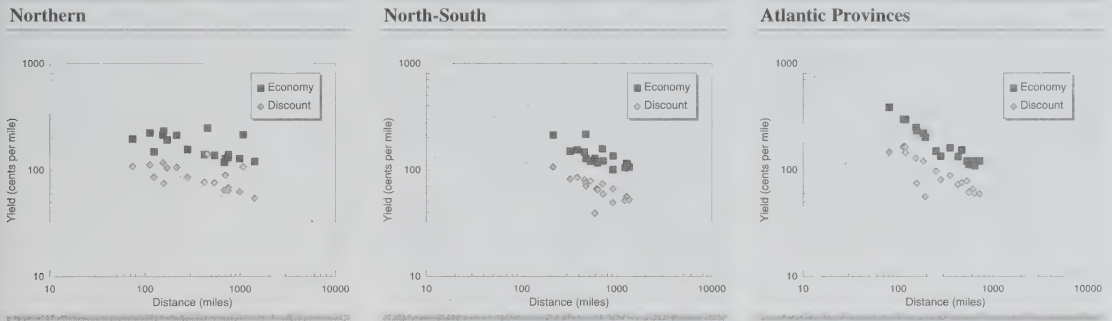
Figure 4.20
Yields
Air Canada and Canadian Airlines



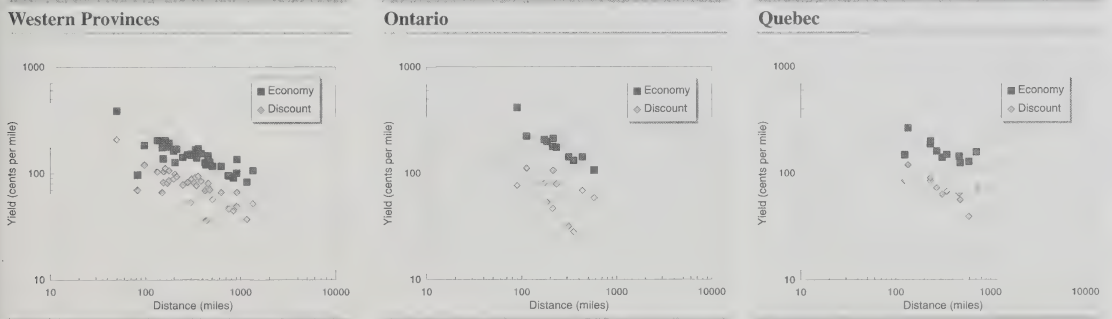
Source: Air Canada and PWA Corporation

¹ A list of these routes is provided in Appendix B.1

Figure 4.21
Intra-Regional Yields¹ - Highlights



- Above average yields tended to be found in the northern, north-south and Atlantic city-pairs. Below average yields were more common in western Canada and Ontario, which have more high density routes.
- In the **northern** region, average discount yields were above average in 14 out of 18 city-pairs. Economy yields were above average on ten of 18 routes. Higher than national average yields were especially noticeable for longer distance city-pair markets.
- In the **west**, economy yields were generally at or below the national average for the 38 sample routes.
- On **north-south** routes the economy yields were about average, but the discount yields were above average in all but two cases.
- Of 11 **Ontario** city-pairs, discount yields in five hub and spoke routes out of Toronto were well below the national average.
- In the **Atlantic** region, 16 of the 18 city-pairs in the sample had discount yields above the national average. Economy yields were above average on short-haul routes.
- In **Quebec**, economy yields were close to the national average, while seven out of 11 discount yields were below average.



Source: Airline Tariff Publishing Company

¹Yields and distances are shown using logarithmically scaled axes.

carried on the airline. Figure 4.20 shows the major carriers' yields both in current dollars and in constant dollars (1986=100).

In 1994, the two major carriers passed an important milestone when they succeeded in increasing both traffic and capacity without diluting their yields in real terms. Air Canada increased yields in real terms by 3.3 per cent, from 8.2 to 8.4 cents per passenger-kilometre, while increasing available seat-kilometres by 12 per cent. Canadian Airlines increased capacity by 3.8 per cent while its real average yield rose by 4.5 per cent from 7.1 to 7.4 cents per passenger-kilometre. Canadian Airlines' yield has tended to be lower than Air Canada's because a greater percentage of its traffic has been carried on long-haul international routes.

Canadian Airlines' yield data for the years prior to 1994 reflect a reclassification of its operating revenues and expenses to conform with the current accounting presentation whereby certain discounts, primarily on tickets sold in Asia, are no longer reported as a commission expense but are rather deducted from passenger revenue.

Yields by Region

The average economy and discount yields (expressed in cents per mile) were derived from the published air fares for the city-pairs (see Appendix B.1 for a list of the city-pairs). Average yields are generally higher on short routes and lower on longer routes, so yield comparisons between regions are affected by the distance between cities in the region.

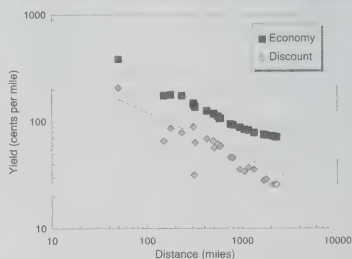
Figure 4.21 provides a comparison of third quarter 1994 average yields for discount and economy fares for domestic city-pairs in six regions with national average economy and discount yield for the same distance. Thus, yields within a region can be compared meaningfully to national averages.

Top 25 City-pairs

Figure 4.22 shows that in the third quarter of 1994, economy yields in 24 of the top 25 domestic city-pairs were lower than the national average for similar distances. Vancouver-Victoria was the exception, with the shortest distance and above-average economy and discount yields. The figure also shows that in 18 of the 25 city-pairs, discount yields were below average as well. These results can be expected, given the economies of scale possible because

these are the most heavily travelled domestic routes.

Figure 4.22
Yields, Top 25 City-Pairs



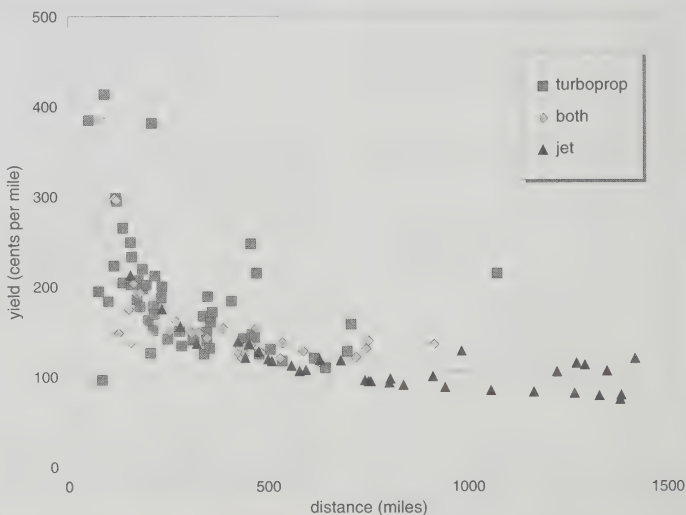
Note: Log-scaled X and Y axes
See Appendix B.1 for list of routes.

Source: Airline Tariff Publishing Company

Yield, Distance and Type of Aircraft

Figure 4.23 shows sample domestic city-pairs up to 1,500 miles apart (2,414 km) according to yield,

Figure 4.23
Economy Yields vs Type of Aircraft
132 Sample City Pairs



Source: Airline Tariff Publishing Company

distance and type of aircraft serving the route: i.e., jet only, turboprop or both. The data is derived from published airline schedules for the third quarter of 1994.

The yield graph shows that air fares are largely dependent on distance, and are not greatly influenced by the type of aircraft performing the service. Fares on all-jet routes are not noticeably higher or lower than turboprop fares for similar distances. However, the proportion of city-pairs with jet service increases rapidly with distance. Speed and passenger comfort are the obvious reasons for the use of jets on all longer routes.

For the 61 city-pairs less than 400 miles apart (644 km), 41 have only turboprop service, 16 have both jet and turboprop, while just four have all-jet service. Of these four routes, two are from Ottawa and Montreal to Toronto (Pearson).

For the 41 city-pairs between 400 and 750 miles apart (644 km to 1,207 km), about one-third have all-jet service, one-third have turboprop service and one-third have both.

Of the 30 city-pairs more than 750 miles apart (1,207 km), 28 have all-jet service. One city-pair has turboprop service (Cambridge Bay-Iqaluit) and one city-pair has both.

Except for the Cambridge Bay-Iqaluit route, (1,073 miles or 1,726 km long and served with enroute stops), turboprop service is largely confined to a maximum distance of 750 miles (1,207 km). There seems to be no corresponding minimum distance for jet service. The shortest route with at least some

jet service is 81 miles (130 km), between Moncton and Saint John. The shortest all-jet route is Gillam-Churchill, a distance of only 154 miles (248 kilometres).

Air Fares: Jets Versus Turboprops

If air fares do not depend on the type of aircraft used, why do airlines use turboprops at all? The answer is that the lower total cost per flight of smaller turboprop aircraft allows an airline to match its capacity and its frequency to demand, and operate in low-density markets. However, the costs per available seat-kilometre (as opposed to the total cost per flight) for turboprops are usually equal to or greater than those of larger jets.

For example, the costs per available seat-kilometre of a 92-seat DC-9 on a 380 kilometre route are about the same as a 50-seat Dash 8-300. The costs per seat-kilometre for the same trip using the 37-seat Dash 8-100 are higher and higher yet for the 19-seat BAe Jetstream 31. On long-haul routes, the cost advantage of jets per seat-kilometre is even greater.

However, if there is insufficient demand to fill the jet to a reasonable load-factor, turboprop aircraft will be the more profitable to operate. Using turboprops allows an airline to tailor capacity more closely to demand in low density markets, by decreasing total costs to the point necessary to operate profitably. Although market forces are the major determinants of today's fare levels, the cost per available seat-kilometre will continue to set the lower limits of air fares.

OPERATIONAL PERFORMANCE

Passenger

Air Canada and Canadian Airlines combined carried 18.2 million scheduled passengers in 1994, an increase of 4.1 per cent from the previous year. Their revenue passenger-kilometres (RPKs) also increased 8.3 per cent to 43.7 billion from 40.7 billion in 1993. Air Canada reported a significant improvement in both domestic and international traffic which contributed to a systemwide increase of 12.2 per cent in its RPKs. However, its capacity, in terms of available seat kilometres (ASKs), rose 14.9 per cent. As a result, its load factor decreased 1.5 percentage points to 62.8 from 64.3 per cent.

Canadian Airlines reported marginal growth in both domestic and international traffic. Its overall RPKs increased 4.3 per cent while its ASKs increased only 3.8 per cent. The resulting load factor of 68.6 per cent for 1994 was relatively unchanged from 1993.

Air Canada's affiliates reported traffic increases for the first nine months of 1994. Passenger traffic, measured by RPKs, increased 10 per cent while the number of passengers carried increased 9.5 per cent over the previous year. Canadian Airlines' affiliates experienced reductions in both passengers carried and RPKs during the first three quarters of 1994. The strike by Canadian Regional's pilots and Air Atlantic's financial troubles were contributing factors in the decline in passengers carried by Canadian Airlines' affiliates.

Table 4.8
Scheduled Passenger Traffic

	Passengers		Passenger-Kilometres	
	1994 (000's)	% Change from 1993	1994 (000's)	% Change from 1993
Air Canada	11,238	5.3	22,992	12.2
Canadian Airlines ¹	6,960	1.6	20,785	4.3
Air Canada Connectors ^{2,3}	3,007	9.5	1,374	10.0
Canadian Partners ^{3,4}	2,184	(2.8)	1,001	(2.1)

() Indicates negative figures

¹ Preliminary data.

² Includes Air Alliance, AirBC, Air Nova, Air Ontario and NWT Air.

³ First nine months' data only.

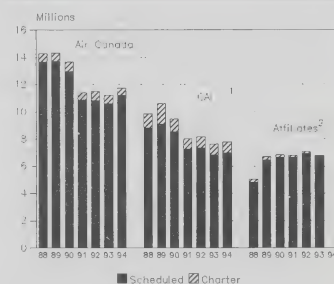
⁴ Includes Air Atlantic, Calm Air, Canadian Regional (Canadian Partner and Time Air) and Inter-Canadian.

Source: Statistics Canada

Fewer passengers travelled on domestic scheduled flights during the first six months of 1994. Just under five million passengers travelled on scheduled services in Canada, a decrease of 1.9 per cent from a year earlier. The majority of the top 25 domestic city-pairs experienced declines in scheduled passenger traffic, resulting in a combined decrease of 2.1 per cent. However, if the passengers carried by the charter carriers are included, domestic passenger traffic on these city-pairs showed a slight increase of 0.4 per cent in 1994.

Toronto continued to be the focal point for a major portion of traffic in Canada. The city's predominance as an origin or destination for domestic scheduled traffic is confirmed by its appearance on seven of the top ten city-pairs and nine of the top 25.

Figure 4.24
Number of Passengers Carried



¹ Includes Wardair in 1989.

² See notes to Table 4.8

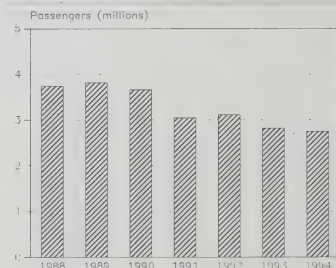
Source: Statistics Canada

Montreal-Toronto, the number one city-pair, accounted for 11 per cent of the total domestic traffic in Canada and 20 per cent of the top 25 during the first half of 1994. This city-pair showed a decrease of four per cent in passenger traffic from the

previous year. Edmonton-Vancouver was hit the hardest with a 17.4 per cent drop in traffic. Of the top 25 city-pairs which showed increases during this period, Vancouver-Victoria stood out with a substantial 16.3 per cent rise in passenger volume. Halifax-St. John's and St. John's-Toronto also experienced sizeable increases of 9.9 and 5.7 per cent respectively.

City-pairs in which a high percentage of the passengers are connecting with transborder or international flights at a hub or are travelling with carriers which do not participate in this Statistics Canada survey, may be underestimated. An example is Quebec's Jean Lesage airport which ranks tenth in Canada for total emplaned/deplaned passengers while the city-pair, Quebec-Montreal, does not appear in the top 25 domestic markets.

Figure 4.25
Passengers Carried on Scheduled Service, Top 25 Domestic Origin-Destination City-Pairs



Source: Statistics Canada

Cargo

For the first six months of 1994, the volume of cargo handled on major scheduled services at Canadian airports totalled 340.6 million kilograms, down 9.5 per cent from 1993. The decline in cargo volume

Table 4.9

Passengers Carried on Scheduled Services - Top 25 Domestic Origin-Destination City-Pairs: January to June 1994

City-Pair	1994 Passengers	% Increase (Decrease) from 1993
Montreal-Toronto	541,090	(3.6)
Ottawa-Toronto	307,100	(4.3)
Toronto-Vancouver	247,070	1.8
Calgary-Vancouver	162,460	(0.1)
Calgary-Toronto	147,500	0.3
Toronto-Winnipeg	117,960	1.2
Calgary-Edmonton	139,100	2.9
Halifax-Toronto	116,210	(0.7)
Edmonton-Vancouver	112,420	(17.4)
Edmonton-Toronto	89,170	(6.4)
Vancouver-Victoria	75,300	16.3
Thunder Bay-Toronto	73,230	(7.3)
Montreal-Vancouver	66,630	(1.3)
Ottawa-Vancouver	62,010	(5.6)
Vancouver-Winnipeg	54,770	(2.0)
Calgary-Winnipeg	54,650	4.0
Prince George-Vancouver	53,200	(7.5)
Halifax-Ottawa	46,390	0.3
Kelowna-Vancouver	44,010	(1.4)
St. John's-Toronto	43,840	5.7
Halifax-Montreal	41,010	(2.7)
Halifax-St. John's	40,600	9.9
Ottawa-Winnipeg	40,400	(10.2)
Calgary-Montreal	39,810	(5.1)
Calgary-Ottawa	38,310	3.4
Total (Top 25)	2,754,240	(2.1)
Total (All city-pairs)	4,949,529	(1.9)

Source: Statistics Canada

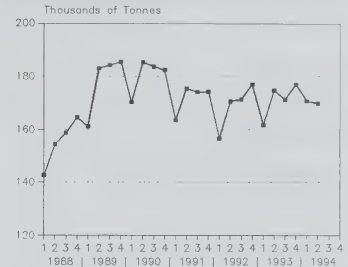
was a result of a decrease in domestic traffic. The discontinuation by Air Canada of its dedicated DC-8 freighter services at the end of March, was a major reason for the

decline. International cargo growth was a priority for both major airlines in 1994. Both Air Canada and Canadian Airlines attempted to strengthen their positions in existing

markets and added strong cargo destinations to their networks.

Figure 4.26

Cargo Handled on Scheduled Services at Canadian Airports



Source: Statistics Canada

Approximately 80 per cent of the air cargo carried on scheduled services moved through Toronto, Montreal and Vancouver. Lester B. Pearson remains the leading airport with respect to cargo traffic. During the first six months of 1994, the airport handled 43 per cent of all scheduled cargo traffic. Cargo volumes at Pearson did, however, decline by 2.2 per cent to 145.7 million kilograms from 149.1 million a year earlier. The shortfall was due to decreases in both domestic and transborder traffic; international shipments showed strong growth with an increase of 10.2 per cent. Unlike Pearson, Vancouver International experienced an increase in traffic volume. During the first six months of 1994, the airport handled 22 per cent of the total scheduled traffic moved through Canadian airports. In total, cargo shipments moving through this airport increased by 14.9 per cent in 1994. While the volumes of domestic cargo were virtually unchanged, its transborder and international volumes grew by 14.2 and 40.1 per cent respectively.

Table 4.10
Scheduled Cargo Traffic

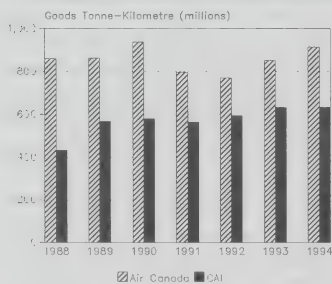
	Tonnes		Goods Tonne-Kilometres	
	1994 (000's)	% Change from 1993	1994 (000's)	% Change from 1993
Air Canada	226,788	(9.0)	913,950	7.3
Canadian Airlines	167,010	5.9	632,052	(0.4)

Source: Statistics Canada

This growth was attributable mainly to increased traffic to Japan and other Asian markets. Declines in cargo activity were experienced at Montreal's two airports, Dorval and Mirabel. Together these airports accounted for 15 per cent of total cargo volume in Canada. Of the top 30 airports, the largest volume gains occurred at Edmonton Municipal, Hamilton, Victoria and Saskatoon.

it carried a larger percentage of its cargo on long-haul routes. With the winding down of its domestic freighter service, international cargo growth became a priority as it added new long-haul markets such as New Delhi and Seoul. By the end of 1994, New Delhi emerged as Air Canada's third highest generator of cargo and Seoul had already become an extremely important market.

Figure 4.27
Scheduled Cargo Traffic



Source: Statistics Canada

Although Air Canada continued to dominate the air cargo sector in 1994, its market share dropped from 60 per cent in 1993 to 58 per cent. While it produced more goods tonne-kilometres in 1994, actual tonnage carried declined. The decrease in tonnage rather than goods tonne-kilometres suggests that

Canadian Airlines' tonnage increased in 1994, while goods tonne-kilometres dropped slightly, suggesting that the carrier continued to focus on its short-haul service. In 1993, the carrier began flying two Boeing 737 freighters in dedicated cross-country overnight service. In 1994, another two all-freight 737's were added to this service.

Northern Air Cargo

Air cargo services are crucial to most northern and remote communities. In fact, ten of the top 30 airports, ranked by volume of cargo handled on scheduled services, are in the North i.e., Yellowknife, Iqaluit, Goose Bay, Whitehorse, Norman Wells, Resolute Bay, Kuujuaupik, Wabush, Cambridge Bay and Fort St. John.

During the first six months of 1994, the volume of traffic handled at northern airports increased by 12.6 per cent over the previous year. Two of the largest centres, Yellowknife and Iqaluit, showed strong growth with increases of 54.5 and 29.7 per cent respectively. Traffic also increased significantly at Fort McMurray (103.6 per cent) and Wabush (65.3 per cent). Cargo volume did, however, decrease in a number of northern communities such as Gillam, Cambridge Bay and Resolute Bay.

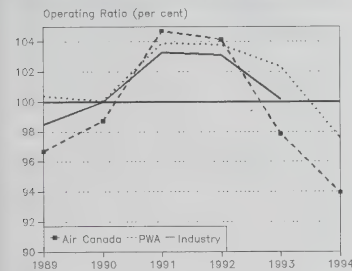
Results from the Agency's 1994 Northern Air Survey indicate that respondents felt that air cargo services in their community were satisfactory in 1994. Factors such as frequency of flights, available cargo capacity and carrier reliability were all deemed acceptable. Opinions were divided on the issue of air cargo rates. Fifty-two per cent of those surveyed indicated they were dissatisfied with air rates while 48 per cent said they were satisfied with the rates offered to their community. Comments, however, seemed to support those dissatisfied with transportation costs in the North. A number of people also expressed concern over the new airport policy and its impact on their communities.

FINANCIAL PERFORMANCE

For Canadian air carriers, 1994 was a year of positive financial turnaround, and the beginning of a recovery. Growing domestic and world economies provided the background for an impressive change in the fortunes of Canada's two major air

carriers. Air Canada and PWA Corporation moved from combined losses of \$618 million in 1993 to a combined net profit of \$91 million in 1994, a remarkable \$709 million turnaround in one year.

Figure 4.28
Canadian Air Carriers
Operating Ratios



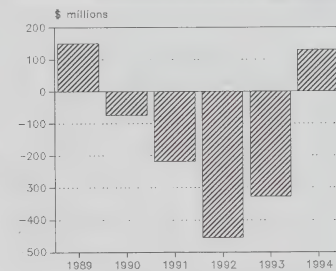
Source: Air Canada, PWA Corporation and Statistics Canada

Air Canada

Air Canada announced a \$129 million net profit for 1994, its first profit since 1989. Compared to a net loss of \$326 million in 1993, Air Canada improved its earnings by \$455 million in just one year. The carrier also announced a record operating income of \$244 million, a steep jump from 1993's \$77 million. Unlike recent years, Air Canada did not report any staff reduction and

retirement costs, but did have a one-time non-operating gain of \$79 million related to the restructuring of the Gemini reservation system. Operating revenues from passenger, cargo and other operations increased over 1993 by nearly 12 per cent, or \$426 million, while operating expenses also increased as the airline expanded operations, but by only 7.4 per cent, or \$259 million.

Figure 4.29
Air Canada
Net Income (Loss)



Source: Air Canada

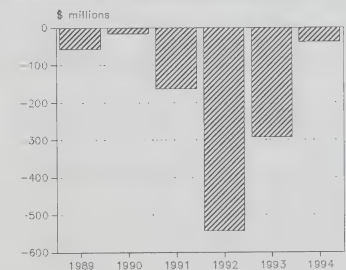
Air Canada's year-end cash and short-term investments were \$599 million, a decrease of \$246 million from 1993. About half of this cash decrease (\$128 million) was used for reducing long-term debt. Improved operating revenues, combined with the slower increase in

operating expenses, brought the operating ratio for 1994 down to 94 per cent, compared to 98 per cent in 1993. The ratio had been as high as 105 per cent in 1991. Interest expense, though, increased to \$249 million, up by \$21 million from 1993.

PWA Corporation

In 1994 PWA Corporation, Canadian Airlines' parent company, reported a net loss of \$37.8 million, a \$254 million improvement over the loss of \$291.8 million in 1993. The 1993 loss was after restructuring expenses of \$112.3 million, including foreign exchange losses of \$52.4 million. No restructuring expenses were recorded in 1994. PWA Corporation last reported a net profit in 1988. However, the carrier also announced an operating income of \$70.9 million for the year, the first positive operating result since 1988, and a \$136 million improvement over 1993.

Figure 4.30
PWA Corporation
Net Income (Loss)



Source: PWA Corporation

Unlike 1993, PWA Corporation did not incur non-operating expenses for restructuring costs. In 1993, these expenses amounted to \$60 million. In 1994, PWA Corporation, adopted a revised accounting methodology

Table 4.11
Air Canada's Financial Results (\$ millions)

	1989	1990	1991	1992	1993	1994
Operating Revenue	3,618	3,899	3,485	3,501	3,598	4,024
Operating Expense	3,499	3,849	3,649	3,646	3,521	3,780
Operating Income (Loss)	103	(11)	(200)	(197)	1	244
Net Income (Loss)	149	(74)	(218)	(454)	(326)	129

Source: Air Canada

Table 4.12

PWA Corporation's Financial Results (\$ millions)

	1989	1990	1991	1992	1993	1994
Operating Revenue	2,545	2,625	2,730	2,709	2,754	2,954
Operating Expense	2,555	2,636	2,842	2,818	2,819	2,883
Operating Income (Loss)	(10)	(12)	(112)	(109)	(65)	71
Net Income (Loss)	(56)	(15)	(162)	(543)	(292)	(38)

Source: PWA Corporation

pertaining to commissions for discount tickets sold in Asia. As a result, operating revenues and expenses for the years prior to 1994 have been restated.

Operating revenues from passenger, cargo and other operations increased by \$199.2 million, or 7.2 per cent, while operating expenses were also higher because of the airline's expanding services, but by only \$63.4 million, or 2.2 per cent.

PWA Corporation's year-end cash and short-term investments totalled \$105.8 million, a slight decrease of \$3 million from the 1993 level. Higher operating revenues, combined with the slower increase in operating expenses, brought the operating ratio down to 97.6 percent, compared to 102.4 per cent in 1993. The operating ratio had been as high as 104 per cent in 1991.

In April 1994, PWA Corporation completed its restructuring agreement with the U.S. company AMR Corporation. Partly as a result of this restructuring, which involved the conversion of debt to equity, their net interest expenses dropped to \$76.0 million, down 36 per cent or

\$43 million from \$119 million in 1993.

Regional Affiliates

During the first three quarters of 1994, Air Canada's affiliates reported net income of \$17.8 million compared to \$8.5 million for the corresponding period in 1993 and \$13.8 million for all four quarters. Their operating income for the first three quarters of 1994 was \$69.2 million, a 10.8 per cent improvement from the first three quarters of 1993.

During the first three quarters of 1994, Canadian Airlines' affiliates

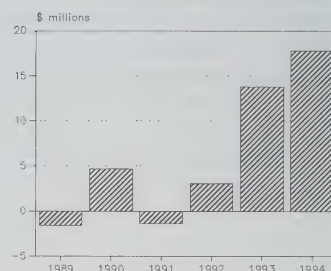
Table 4.13

Financial Results of Air Canada Connectors¹ (\$ millions)

	1989	1990	1991	1992	1993	1994 ²
Operating Revenue	347.3	465.5	476.7	499.3	528.2	427.2
Operating Expense	311.0	407.3	420.1	437.1	443.7	358.0
Operating Income (Loss)	36.3	58.2	56.6	62.2	84.5	69.2
Net Income (Loss)	(1.6)	4.7	(1.4)	3.0	13.8	17.8

¹ Includes Air Nova, Air Alliance, Air Ontario, NWT AIR, and AirBC² Preliminary first three quarters.

Source: Statistics Canada

Figure 4.31¹
**Air Canada Connectors
Net Income (Loss)**¹ See notes to Table 4.13

Source: Statistics Canada

reported a net loss of \$14.7 million compared to a loss of \$16.6 million for the corresponding period in 1993 and \$21.1 million for all of the year. Their operating income for the first three quarters of 1994 was \$3.7 million. The grounding of Canadian Regional's and Air Alliance's ATR-42s in December undoubtedly had an adverse effect on the carriers' operating income for the fourth quarter and will likely preclude the group's ability to match the \$9.8 million reported for 1993.

Air Atlantic, a Canadian Partner, staved off bankruptcy in 1994 when

Table 4.14

Financial Results of Canadian Partners¹ (\$ millions)

	1989	1990	1991	1992	1993	1994 ²
Operating Revenue	292.4	299.1	403.3	401.1	405.4	318.9
Operating Expense	273.2	297.0	414.6	409.8	395.6	315.2
Operating Income (Loss)	19.2	2.1	(11.3)	(8.7)	9.8	3.7
Net Income (Loss)	(0.4)	(0.4)	(30.8)	(29.2)	(21.1)	(14.7)

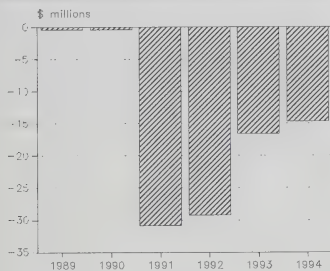
¹ Includes Air Atlantic, Inter-Canadien, Canadian Regional Airlines, and Calm Air.

² Preliminary first three quarters.

Source: Statistics Canada

creditors agreed to trade debt for equity in a reorganized company. Although PWA Corporation no longer holds a stake in Air Atlantic, the air carrier continues to operate as a Canadian Partner.

Figure 4.32¹
**Canadian Partners
Net Income (Loss)**



¹ See notes to Table 4.14

Source: Statistics Canada

COMPETITION

By 1990, several carriers (Canada 3000, Worldways Canada, Nationair, Intair and First Air) had moved to fill the void created by PWA Corporation's acquisition of Wardair. In the ensuing years, several charter carriers failed, including Worldways

in 1991 and Nationair in 1993, after trying unsuccessfully to compete with Air Canada and Canadian Airlines on the Toronto to Montreal and Ottawa routes.

The void created by Nationair's departure in April 1993 was quickly filled by Air Transat, Canada 3000 and Royal. Along with First Air, these carriers maintained international charter capacity and allocated additional capacity to the domestic market, especially on key long-haul markets.

Low-cost Canadian operators of large jet aircraft and tour operators are an important source of year-round competition to Air Canada and Canadian Airlines in domestic air markets.

On ten of the busiest medium and long-haul routes in Canada, which account for over one-quarter of all domestic scheduled and charter passengers, the share of passengers carried by the charter carriers steadily increased from nine per cent in 1990 to over 20 per cent in 1993.

By 1993, the large jet charter carriers were active in 13 of the top 25 domestic city-pairs as well as in five smaller markets; this was up from nine city-pairs in 1992. Furthermore, the charter carriers provided year-round competition to Air Canada and Canadian Airlines in several markets.

Air Transat, Canada 3000 and Royal expanded their air services on domestic routes from the 18 city-pairs in the summer of 1993 to 33 city-pairs in the summer of 1994, 24 of these in direct competition with the scheduled airlines, Air Canada and Canadian Airlines. Their planned operations added capacity on long-haul markets and introduced service to several smaller cities and regional routes (e.g. Halifax-St. John's, Charlottetown-Moncton, Regina-Vancouver, and Winnipeg-Victoria).

The average length of the new routes served for the first time in 1994 was only 796 kilometres, compared to the 1993 average of 2,217 kilometres. These figures suggest that the charter carriers may have fully exploited the long haul routes, where they can compete purely on the basis of price, and are now moving into regional and/or low density markets where they can compete by filling service niches.

The charter carriers are not competing on the busiest short-haul domestic routes, namely between Toronto and Montreal and Ottawa. This is due in large part to the type of traffic that is prevalent on them, i.e., business travellers who place flexibility, frequency and service ahead of price. Also, these routes have been heavily defended by Air Canada and Canadian Airlines in the past.

The impact of the charter carriers' operations on the domestic market is more evident in the individual city-pair data. In 1993, the last year for which annual data is available, the charter carriers captured over seven per cent of all domestic origin-destination domestic passengers. In key long-haul markets (e.g. Vancouver-Montreal/Winnipeg and

Toronto-Calgary/Halifax), these carriers carried over 28 per cent of the total traffic; for Toronto-Vancouver they captured over 30 per cent of the market. This translated into 23 per cent of local origin-destination passenger traffic for the top ten city-pairs in Canada which, in 1993, accounted for 22 percent of the total domestic market.

***Domestic charter
passenger traffic for
the first three quarters
of 1994 up 26 per cent
from 1993.***

A similar situation existed during the first six months of 1994 where the charter carriers continued to account for more than 20 per cent of the

passengers carried in several long-haul domestic markets, including more than 30 per cent of the passengers travelling between Vancouver-Winnipeg and Toronto-Vancouver. (See Table 4.15) The impact of the charter carriers in these domestic markets may be underestimated since key third quarter origin-destination data is not available. The total number of passengers carried on domestic charter flights for the first nine months of 1994 was up 26 per cent from the corresponding level in 1993. This compares with the more modest increase of three per cent reported by Air Canada and Canadian Airlines.

Competition from charter programs has undoubtedly affected air fares on domestic routes. On 14 of the top

Table 4.15

**Total Origin & Destination Passengers Carried on
Domestic Scheduled and Charter Services: January - June, 1994**

Rank	Scheduled Passengers	Charter Passengers	Scheduled and Charter Passengers	Charter Share
1. Vancouver-Winnipeg	54,770	27,995	82,765	33.8%
2. Toronto-Vancouver	247,070	106,296	353,366	30.1%
3. St. John's-Toronto	43,840	13,991	57,831	24.2%
4. Edmonton-Toronto	89,170	24,811	113,981	21.8%
5. Ottawa-Vancouver	62,010	16,822	78,832	21.3%
6. Edmonton-Vancouver	112,420	27,265	139,685	19.5%
7. Toronto-Winnipeg	117,960	27,334	145,294	18.8%
8. Halifax-Toronto	116,210	26,261	142,471	18.4%
9. Calgary-Toronto	147,500	28,164	175,664	16.0%
10. Montreal-Vancouver	66,630	12,042	78,672	15.3%
Sample Total:	1,057,580	310,981	1,368,561	22.7%
Total Domestic:	4,949,520	368,040	5,317,560	6.9%
Sample as % of Total:	21.4%	84.5%	25.7%	

Source: Statistics Canada

City-pairs in the Top 25 Domestic Markets Which Have Charter Competition

Toronto-Vancouver
 Toronto-Calgary
 Edmonton-Toronto
 Toronto-Winnipeg
 Halifax-Toronto
 Toronto-St. John's
 Montreal-Vancouver
 Ottawa-Vancouver
 Halifax-Ottawa
 Halifax-St. John's
 Vancouver-Winnipeg
 Vancouver-Calgary
 Edmonton-Vancouver
 Calgary-Montreal

25 domestic city-pairs with charter competition, the average discount offered by the major carriers during the second quarter of 1994 was 55 per cent with 72 per cent of the passengers travelling on discount fares. On the 11 routes without charter activity, the average discount was only 36 per cent with only 63 per cent of all passengers travelling on a discount fare. In addition, on the top 25 routes with charter competition, 67 per cent of all passengers flew on deep discounts (i.e. discounts of 30 per cent or more off the regular economy fare), compared to 39 per cent on routes without charters.

The charter carriers provide service on a wide variety of routes and offer low fares, one-way itineraries, flexible arrival and departure points, last-minute bookings plus senior and youth fares. As such, these low-cost carriers represent an undeniable source of year round competition in

domestic air service markets. Given the past success of the charter carriers in making inroads into the domestic market and the large increase in their domestic operations in 1994, these carriers will likely continue to be a major competitive force in the domestic passenger market in the future.

In many cases, the distinction between scheduled and domestic charter air services has become blurred.

Air Canada's and Canadian Airlines' passenger base on many long-haul and medium-haul routes in Canada is facing competition from the charter carriers. In addition to attracting the traditional leisure/holiday passenger, many value-conscious business travellers are beginning to utilize these services as well. This is placing pressure on the majors and is causing them to not only offer competitive fares but to also emphasize the services that they are equipped to provide, i.e., frequent-flier programs, executive airport lounges, premium meals, personal space on board and other in-flight and terminal amenities.

As the major carriers reduce their costs, they will be able to compete more aggressively with the charter carriers in terms of both capacity and price.

In transborder markets, both Canadian and U.S. carriers have launched several new services following the signing of the Canada-U.S. bilateral agreement. Many new

air services are in the process of being implemented, including numerous service options that will be available to the travelling public through code-sharing arrangements between Air Canada and Continental and United and between Canadian Airlines and American Airlines. Furthermore, several other U.S. and Canadian carriers have either introduced or are planning to introduce new transborder air services.

In addition to the many new air services being offered, relatively low introductory fares are also being offered on several routes as new services are launched. Expanded service and an increase in the number of carriers will undoubtedly lead to greater price competition on these routes.

RAIL SERVICES

Highlights of 1994

Traffic

Railway traffic increased 13 per cent to 270 million tonnes. All major commodity groups shared in the increase, with intermodal traffic leading the way.

Restructuring

CN and CP first discussed merger of their eastern lines, then CP made a purchase offer for CN's eastern lines. This was rejected. In early 1995, a government task force recommended the commercialization of CN. The government intends to proceed with the commercialization before the end of 1995.

Legislation

The government held consultations on rail renewal in the fall of 1994 and intends to introduce new legislation in 1995. The change would permit easier market exit for the railways and creation of short-line railways.

Equipment

The surge in traffic created temporary equipment shortages for the railways. CN and CP put some retired locomotives back into service and placed substantial orders for new locomotives and freight cars.

Labour

Railway management and unions failed to reach agreement on new contracts to replace those which expired in December 1993. After mediation failed too, there was a nine-day strike/lockout in March 1995. This was ended by back-to-work legislation.

Infrastructure

CP opened the Windsor-Detroit tunnel enlargement in May 1994 and CN started using its new Sarnia-Port Huron tunnel in April 1995. The tunnels offer increased capacity and faster transit times between eastern Canada and the U.S. Midwest.

Financial Performance

CN North America reported an operating income of \$271 million, in contrast to an operating loss of \$75 million in 1993. For CP Rail System, the 1994 operating income was \$277 million, up from \$245 million the year before.



REGULATORY ENVIRONMENT

Most railways in Canada are federally regulated and are governed by various Acts of Parliament and the regulations that evolve from them. For the railways, four Acts carry the most importance. The *National Transportation Act, 1987*, (NTA, 1987), sets the framework for economic regulation of transport in Canada and has many specific rail provisions. The *Railway Act* regulates the operations of railways in Canada. The *Railway Safety Act* covers railway safety matters. The *Western Grain Transportation Act* (WGTA) contains provisions on the rates and subsidies for the movement of western grain to ports for export.

The Agency oversees the economic regulation of railways while Transport Canada governs safety of their operations. This section of the rail chapter describes, for 1994, changes in rail legislation and regulations, some of the Agency's major rail regulatory activities (excluding network rationalization, which is in the industry structure section), and the rail subsidy programs in effect.

Legislation

The most important change affecting legislation occurred on February 27, 1995 when, in his budget speech, the Minister of Finance announced the ending of the WGTA, the *Maritime Freight Rates Act* (MFRA) and the *Atlantic Region Freight Assistance Act* (ARFAA) subsidy programs effective the summer of 1995.

At the end of the year, the federal government announced that, in 1995,

Federal Legislation Governing the Railway Industry

- *Atlantic Region Freight Assistance Act*
- *Canadian National Railways Act*
- *Canadian Transportation Accident Investigation and Safety Board Act*
- *Department of Transport Act*
- *Government Railways Act*
- *Heritage Railway Stations Protection Act*
- *Intercolonial & PEI Railways Employees' Provident Fund Act*
- *Maritime Freight Rates Act*
- *National Transportation Act, 1987*
- *Passenger Tickets Act*
- *Railway Act*
- *Railway Relocation & Crossing Act*
- *Railway Safety Act*
- *Safe Containers Convention Act*
- *Transport Act*
- *Transportation of Dangerous Goods Act*
- *Western Grain Transportation Act*

Federal Ownership of Rail Infrastructure and Equipment

Rail-related assets of Canadian National Railway Company, VIA Rail Canada Inc., Devco Railway.

Federal grain car fleet (12,902 hopper cars)

WGTA, MFRA and ARFAA subsidy programs to end in 1995.

it will introduce a new national rail policy which will amend the NTA, 1987 and the *Railway Act*. Through the new policy, the government intends to encourage the development of short-line railways and proposes to permit rail carriers to abandon freight service with little notice. With these changes, Transport Canada wants to encourage "an integrated freight transportation system", — a system that would treat all modes equally without special provisions.

The Minister of Transport appointed a committee to review the *Railway Safety Act* in 1994. The committee was established under the *Railway Safety Act*, which required a review of the legislation after five years. In February, 1995, the committee made recommendations to improve the Act.

During the summer of 1994, the Producer Payment Panel issued its report on WGTA payments. According to the report, the bulk of the subsidy should be shifted to direct producer payments, initially on the basis of cultivated acres but gradually changing to arable acres over a seven-year period. In December, 1994, the Minister of Agriculture and Agrifood Business tabled proposed changes to the WGTA that would prevent railways from "back-hauling" U.S.-bound grain from Thunder Bay to Fort Frances and Winnipeg simply to qualify for the subsidy. The government intends to proceed with a proposed change which would implement charges for demurrage

and storage to discourage the inefficient use of grain cars.

Environmental assessments now required of all proposed rail abandonments.

The *Canadian Environmental Assessment Act (CEAA)* was proclaimed in January 1995. The CEAA will require the Agency to conduct environmental assessments of proposed rail abandonments.

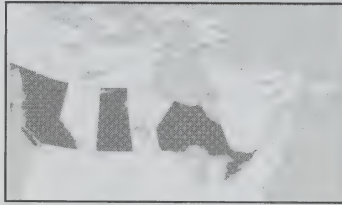
Saskatchewan passes rail labour succession rights legislation.

In 1994, Saskatchewan passed legislation which recognizes the succession rights of federal rail collective agreements to provincial undertakings. Previously, Ontario and British Columbia were the only provinces with such provisions in their legislation. These provisions attracted extensive criticism in the industry because they discourage the development of short-line railways. The large U.S. short-line operator, RailTex, has indicated that it is no longer interested in acquiring surplus lines in Ontario because of the province's succession rights legislation. Figure 5.1 illustrates the parts of Canada affected by such legislation.

Regulations

In 1994, the Agency revoked 14 rail regulations that had become either outdated or redundant since the enactment of the *NTA, 1987* and initiated the amendment of two other

Figure 5.1
Provinces with Succession Rights Legislation



rail regulations, namely, the *Railway Advance Payment Regulations* and the *Railway Costing Regulations*. The former is being amended to update its legislative references and the latter to reflect current costing practices and document filing requirements. Recurring rail regulatory activities by the Agency in 1994 consisted of the Annual Rates Scale Order for Western Grain (1994-95), Minimum Compensatory Rates for the Movements of Rapeseed Products by Rail (1995) and the Railway Interswitching Rates Scale (1995). The process of reviewing rail regulations to see if they should be revised or revoked continues in 1995.

Regulations for Accessibility Standards for Rail Transportation Equipment pertaining to Persons with Disabilities were under development in 1994. Regulations covering Personnel Training for the Assistance of Persons with Disabilities for all modes under federal jurisdiction were implemented in January 1994 and became fully in effect on January 26, 1995.

Major Regulatory Cases

Agency Investigations/Agreements/Decisions

The Agency handled two level-of-service investigations in 1994. In one case, Continental Grain Company Ltd. claimed CP Rail System (CP) refused to provide cars for the shipment to Prince Rupert of alfalfa cubes, canola meal and/or other WGTA grain products from various captive locations in the Prairies. Later in the year, Continental Grain Company Ltd. withdrew its complaint after reaching a settlement with CP.

In July 1994, a complaint was filed that Quebec North Shore and Labrador Railway Company (QNS&L) did not provide adequate and suitable accommodation for the carriage of passengers and their personal effects. In November, the Agency denied the complaint after concluding that the QNS&L had fulfilled its obligations.

The Agency conducted two public interest investigations in 1994.

The Agency received two requests for public interest investigations in 1994. Both investigations are completed. The Port of Thunder Bay alleged prejudice to the public interest by certain CN North America (CN) and CP rates. The rates applied to the movement of potash from certain points in Saskatchewan to Thunder Bay, for transshipment to marine carriers to destinations in the U.S. The Agency conducted an investigation and determined that the CN and CP freight rates were not prejudicial to the public interest as they did not

create an undue obstacle or cause unreasonable discouragement to the movement of commodities to Thunder Bay.

In the second public interest application, Olav Haavaldsrud Timber Company Limited alleged that rates charged by CN for the movement of logs were prejudicial to the public interest. On January 16, 1995, the Agency determined that some of the rates were prejudicial and ordered CN to base the rates on the lower costs resulting from a shorter haul.

Two running rights agreements, under Section 98 of the *Railway Act*, were submitted to the Agency in 1994 for recommendation to the Governor in Council (GIC). CP applied for a running rights agreement over a bridge owned by the Sault Ste. Marie Bridge Company. The GIC sanctioned the agreement in December 1994. In October 1994, an application was submitted for a running rights agreement between CSX Transportation Inc. (CSX) and the Lake Erie and Detroit River Railway Co. for the operation of CSX trains over Lake Erie trackage. The GIC sanctioned the agreement in February, 1995.

In 1994, Bell Canada applied to the Agency to sanction a standard form agreement that Bell Canada would use whenever it needed to cross telephone lines over the rights-of-way of railway companies under the jurisdiction of the Agency. The Agency denied the request because Bell Canada was, in effect, asking the Agency to create new rules, terms or conditions for construction or maintenance of wires or lines

which would apply to all crossings of federal railway rights-of-way.

In October 1994, the Agency investigated and ruled in favour of a complaint against VIA Rail filed on behalf of a traveller with a disability and subsequently ordered VIA Rail to make restitution of extra expenses incurred by the traveller. The Agency also ordered the carrier to clearly communicate its policy on self-reliance and to instruct its employees on how to communicate effectively to meet the needs of passengers with disabilities.

Rate-Related Appeals

Two Agency decisions related to rates were appealed in 1994. One was an appeal to the Federal Court of Appeal and one a petition to the GIC. The appeal concerned the Agency decision on an application by the Upper Lakes Group Inc. alleging that CN was charging non-compensatory rates on fine crushed salt between Windsor, Ontario and Bécancour, Quebec. The Federal Court granted leave to appeal and a decision was still pending at time of writing.

In 1994, the Canadian Shipowners Association petitioned the GIC to rescind a 1993 Agency decision concerning a complaint about improper and non-compensatory rates allegedly charged by CN and CP for the eastbound carriage of grain.

Government Subsidies

The federal government has a long history of providing transport subsidies to Canadian carriers and users. The federal budget of February 27, 1995 reduced or

eliminated most of the subsidy programs.

In 1994, federal rail-related subsidies covered western grain transport, Atlantic region freight, branch lines, passenger-trains, hopper cars and railway-highway crossings.

The Agency is responsible for making payments to railway companies under the *WGTA* for transporting western grain and grain products to west coast ports, Churchill and Thunder Bay. During 1994, payments were \$673 million on tonnage of 37 million tonnes, compared to \$657 million on 31 million tonnes in 1993.

***Railway transport of
western grain
benefitted from
subsidy of
\$673 million.***

Payments to eligible carriers were made under the authority of the *Atlantic Region Freight Assistance Act* and the *Maritime Freight Rates Act*. The amount of payment is based on the amount carriers reduce their freight rates for certain commodities and types of movements within and out of the four Atlantic provinces and the Gaspé region. The Agency also administers this program. Payments to railway companies under *ARFAA* amounted to \$11.2 million in 1993 and \$10.9 million in 1994. Under *MFRA*, railways received payments of \$10.1 million in 1993 and \$9.3 million in 1994. (Most of the *ARFAA* subsidy payments go to trucking firms, which received some

Federal Rail Budgets/ Expenditures* (\$000)

TRANSPORT CANADA	
Railway Safety	9,560
Emergency Planning & Operations**	390
Transport of Dangerous Goods**	10,241
Direction and Administration**	1,473
Total	21,664
NATIONAL TRANSPORTATION AGENCY	
	8,252
TRANSPORTATION SAFETY BOARD (rail/pipeline)	
	7,905
GRAIN TRANSPORTATION AGENCY	
	14,733
Total	52,554

* Excluding Subsidies

** Rail and trucking

Source: 1994-95 Main Estimates

\$89 million under the program in 1994.)

Under the NTA, 1987, railway companies receive payments from the Agency for losses incurred in operating uneconomic branch lines that they have been ordered to maintain in the public interest. These payments came to \$10.7 million in 1994, down from \$25.8 million in 1993. The 1994 federal budget reduced 1994 payments by five per cent, on top of the ten per cent reduction in the 1993 budget. The Agency handled an unusually high number of subsidy claims for prior years during 1993.

The Agency also pays subsidies to certain railways for operating non-VIA passenger-train services in the public interest. In 1994, these payments, which cover 80 per cent of losses, amounted to \$7.7 million, down from \$15.6 million in 1993.

Federal Rail Subsidies (\$000)

WGTA Payments	649,980
VIA Rail Canada Inc.	330,938
Railway Branch Lines	25,796
Grain hopper Cars	15,500
<i>Atlantic Region Freight Assistance Act</i>	
	11,542
<i>Maritime Freight Rates Act</i>	
	9,114
Railway Safety	9,082
Railway Crossings & Safety Programs	9,130
Other Passenger Rail	8,953
Grade Separations	6,000
<i>Strategic Capital Investment Initiatives</i>	
	4,500
Victoria Jubilee Bridge	3,132
Total	1,083,667

Source: 1994-95 Main Estimates

The reasons for the steep drop in payments are identical to those for branch line payments - budget restrictions and an unusually active year in 1993.

Transport Canada administers an annual subsidy to VIA Rail, to cover the railway's losses from operating a national rail passenger network. The 1994 subsidy came to \$331 million.

Through Transport Canada, the government planned to spend \$15.5 million in 1994-95 for a fleet of covered hopper cars for the movement of western grain.

Transport Canada also subsidizes level crossings and grade separations where railway lines and highways meet. The department planned to spend some \$15 million in this area in 1994-95.

In February 1995, the Minister of Finance announced the government is planning to eliminate the WGTA

Revenues/Recoveries on Federal Activities in the Railway Industry (\$000)

GRAIN TRANSPORTATION AGENCY (licences & permits)	
	2,800
Total	2,800

Source: 1994-95 Main Estimates

and ARFAA/MFRA subsidy programs in the summer of 1995. The government will offer a package of transition measures, including a lump sum payment of \$1.6 billion to owners of Prairie farm land. Atlantic Canada provinces and Quebec will receive transitional funding amounting to \$326 million over a five year period. Furthermore, the government intends to reduce VIA Rail's subsidy by \$150 million in two stages beginning in 1995.

INDUSTRY STRUCTURE

This section looks at the structure of the Canadian railway industry in 1994. It describes the network restructuring that occurred during the year, identifies major railway companies and the positions they occupied within the rail industry, and ends with a brief look at the size of the Canadian industry compared to foreign ones.

Network Changes in 1994

Network restructuring continued in 1994 with activity in abandonment and sales of branch lines to short-line operators and merger negotiations between CN and CP.

Both CN and CP have stated that merged operations on their eastern lines are necessary due to the low density of traffic on these networks.

In 1994, they attempted to negotiate a merger of their networks east of Winnipeg and Chicago. However, the negotiations broke down in July when neither side could agree on a value for the other's tracks, freight yards and trains. Consequently, on September 22, CP offered \$1.4 billion to purchase CN's eastern rail operations east of Winnipeg. Figure 5.2 shows the parts of CN's network that CP wanted to buy. The CP proposal would leave unchanged the current ownership and independent operation of the two railways in the west. However, CP's bid was turned down on December 13 because the federal government felt its implications for rail competition and employment would have been unacceptable.

***Government rejects
CP's offer of
\$1.4 billion for CN's
eastern network.***

In September, the Minister of Transport established a parliamentary Task Force to study the possible privatization of CN. The committee's report, released in January 1995, recommended full commercialization of CN as a coast-to-coast mainline rail operation.

Abandonments

To improve their competitiveness and strengthen their financial position, Canada's two Class I freight railways are rationalizing their rail networks. Lines are being

sold, abandoned or jointly used to increase overall traffic densities in the network. Figures 5.3 and 5.4 show the extent of rationalization in both the eastern and western Canadian rail networks during the pre- and post-deregulation period. Details by province are shown in the Appendices.

***Railways abandoned
1,260 kilometres of
track in Canada.***

In 1994, the railways abandoned 1,260 kilometres of track in Canada. Over 80 per cent of this took place on the eastern portion of the Canadian rail network. At the start of 1995, CP abandoned another 350 kilometres of track east of

Figure 5.2
CN Lines that CP Offered to Buy

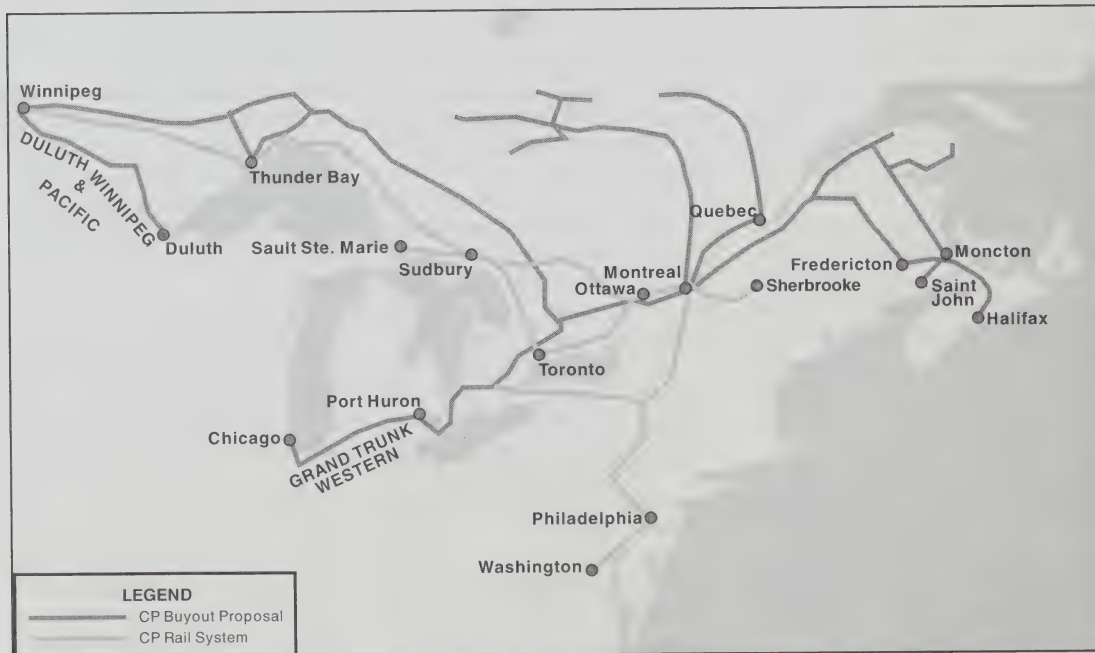


Table 5.1
Branch Line Abandonments - 1994

Province	Trackage Abandoned - Kilometres			
	CN	CP	CSXT	TOTAL
Quebec	186	382	—	568
Ontario	385	4	84	473
Manitoba	54	—	—	54
Saskatchewan	28	89	—	117
British Columbia	—	48	—	48
Total	653	523	84	1,260

Source: National Transportation Agency

Sherbrooke after the GIC changed the original order to abandon from August 23, 1994 to January 1, 1995.

See Appendix C.2 for a detailed summary of branch line abandonment orders and decisions rendered by the Agency in 1994.

The CN Graham subdivision between Sioux Lookout and Thunder Bay, Ontario was originally scheduled for abandonment on September 1, 1994. However, area forest companies using this 250 kilometre track in northern Ontario asked the federal cabinet to overturn the Agency's abandonment ruling. At the request of the Minister of Transport CN agreed not to remove the track until March 1995. CN has agreed to delay further the track removal.

In 1994, CP abandoned 382 kilometres of track, known as the Quebec Central Railway, that stretches northward from Sherbrooke through the Beauce region of Quebec.

Conveyances

In recent years, a common approach to rationalization by Class I railways is to convey lines to other operators. During 1994, the Agency considered four applications for the conveyance of trackage. Three received regulatory approval and one application was still pending at the end of the year.

In July 1994, the Agency approved an agreement between CP, the Dominion Atlantic Railway (DAR) and the Windsor and Hantsport Railway (W&H), whose parent company is the U.S. short-line operator Iron Road Railways Inc., to convey to the W&H CP's 93 kilometre line, owned by DAR, between Windsor Junction and New Minas in Nova Scotia.

In August 1994, the Agency approved the conveyance of the 144 kilometre CN Murray Bay subdivision between Limoulu and Clermont in Quebec to the Quebec Railway Corporation.

In December 1994, the Agency approved the proposed \$8.4 million

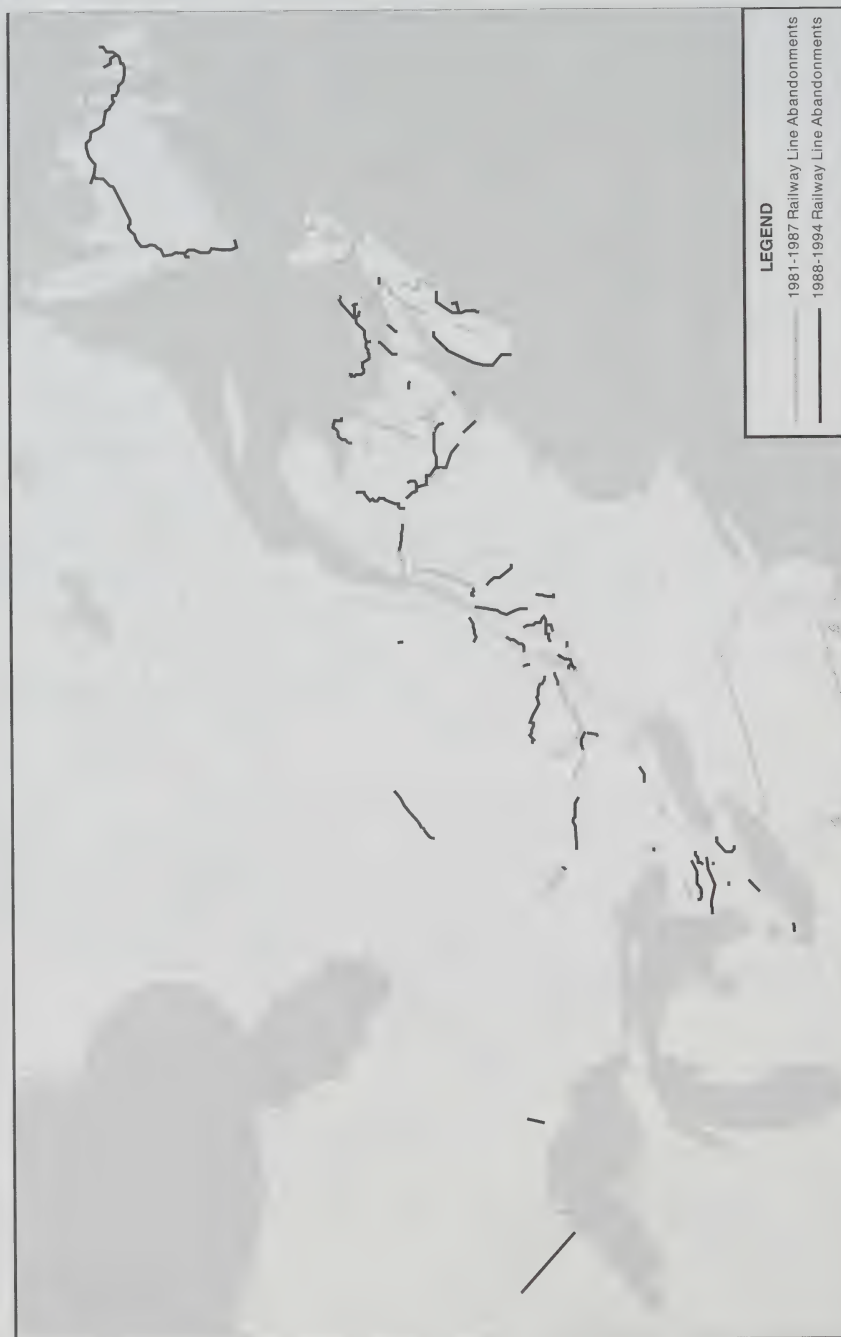
purchase of the 518-kilometre rail line between Sault Ste. Marie and Hearst of the Algoma Central Corporation by Wisconsin Central Transportation Corporation. During the summer, an agreement, subject to government approval, had been reached by which the Wisconsin Central would purchase the Algoma Central Railway. However, in early 1995 the Agency received an application to review the decision approving the sale.

Three conveyances received regulatory approval in 1994.

CN has proposed to purchase the Alberta Resources Railway Corporation (ARR), which operates 374 kilometres of line between Swan Landing and Grande Prairie in western Alberta. As the ARR has been operating under a lease agreement with CN for many years, the purchase would allow CN to operate the ARR without first deferring to the provincial government. The price attached to this transaction is over \$30 million. Notice of Agreement was filed with the Agency in November 1994. The Agency approved the agreement in April 1995.

Two Agency conveyance decisions are under appeal before the courts. One is the 1990 Agency decision on the conveyance of the CN Massena subdivision to Conrail. The other case involves the 1993 Agency decision on the agreement between CN and CP to convey segments of their lines to the CN/CP Ottawa Valley Partnership. As a result of the appeal, the Agency varied the abandonment date of the CP Chalk

Figure 5.3
Eastern Canada: Lines Abandoned Before and After 1988



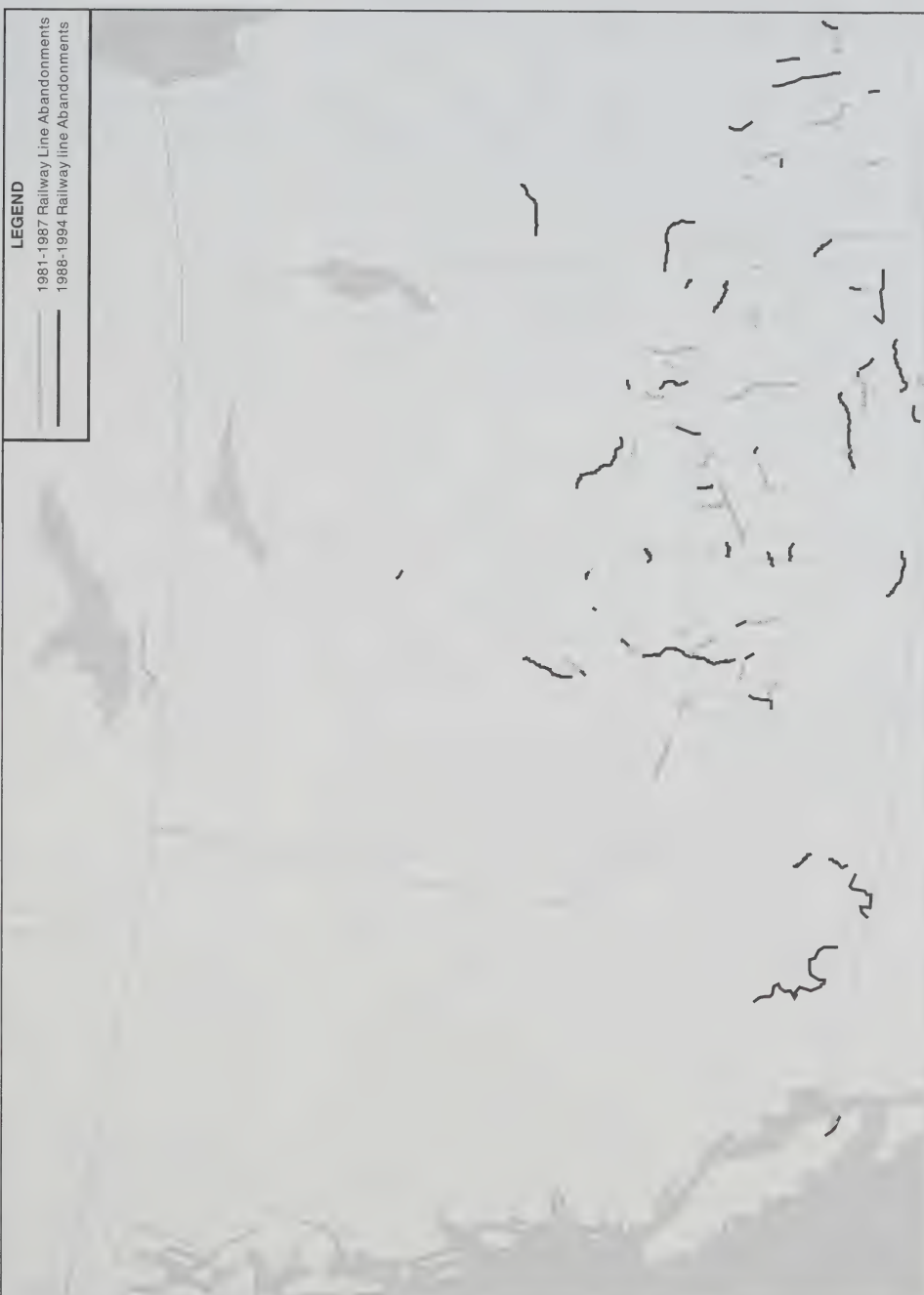


Figure 5.4
Western Canada: Lines Abandoned Before and After 1988

River/North Bay and CN Newmarket subdivisions to July 1, 1995.

On January 1, 1995, CP ceased operations on the line from Saint John through Maine to Sherbrooke. To maintain rail service in the region for both north-south and east-west traffic, in 1994 CP looked for potential buyers. Various companies expressed interest, including Guilford Transportation Industries and CANTRAK (later NorRail). CP started negotiations with CANTRAK that later failed. In the end, CP reached an agreement with the J.D. Irving Company and Iron Road Railways.

In early 1995, CP signed an agreement with J.D. Irving for the takeover of rail operations between Saint John and Brownville Jct. in Maine by two new Irving companies. In New Brunswick, an Irving subsidiary, New Brunswick Southern Railway Company Limited, will now operate the railway between Saint John and the Maine-New Brunswick border, including trackage between McAdam and St. Stephen. CP sold the rail assets between the Maine-New Brunswick border and Brownville Jct. to the Eastern Maine Railroad Company, another newly-created Irving subsidiary. Also in early 1995, CP sold the railway assets between Sherbrooke and Brownville Jct. to the newly-created Canadian American Railroad Company, owned by Iron Road Railways.

In April 1994, the Agency granted approval to CN and CP for a transfer of subdivisions in Saskatchewan. In 1993, the railways filed a Notice of Agreement to convey CN's

Weyburn/Bengough subdivision to CP and to convey CP's Meadow Lake subdivision to CN.

South of the border, CN North America selected the short-line operator RailTex as the purchaser, for US\$40 million, of its U.S. subsidiary, Central Vermont Railway. This 520-kilometre line runs from the U.S.-Canada border south of Montreal to New London, Connecticut. The sale received regulatory approval from the Interstate Commerce Commission in December 1994.

Major Rail Industry Groups

Twenty-eight common carrier railways operate in Canada. Three are transcontinental systems and the others are regional railways. The chief function of two of the transcontinental railways, CN and CP, is to move products, especially bulk commodities such as grain, coal, potash and sulphur, to markets. For the most part, domestic railway passenger services are provided by the third transcontinental system, VIA Rail Canada Inc. (VIA Rail), a federal Crown corporation.

Twenty-eight common carrier railways operate in Canada.

Both Class I freight railways in Canada have restructured in recent years to integrate their domestic operations with their respective U.S. rail operations. Although the Annual Review focuses on the operations of transport in Canada, it also notes any relevant activities of Canadian railways in the U.S.

Class I Railways

CN North America

Canadian National Railways announced in December 1991 the formation of CN North America, to consist of its railway lines in Canada and its three U.S. rail subsidiaries: the Grand Trunk Western Railroad (GTW), the Duluth, Winnipeg and Pacific Railway (DWP), and the Central Vermont Railway (CVR). In December 1994, however, the Interstate Commerce Commission approved the purchase of the CVR from CN North America by short-line operator RailTex. CN at present has an application before the Interstate Commerce Commission to integrate fully the GTW and the DWP into CN North America.

CN North America supplies carload and intermodal distribution systems in Canada and the U.S. Government-owned CN operates the longest trackage in Canada, serving eight provinces directly and the other two with intermodal services, as well as the Great Slave Lake area of the Northwest Territories.

CP Rail System

Privately owned by Canadian Pacific Ltd., CP operates freight services in seven Canadian provinces. CP's two U.S. subsidiaries, the Soo Line and the Delaware and Hudson (now referred to by CP as the Bridge Line Division), operate in the mid-western states and the eastern seaboard, respectively.

CP gradually integrated operations of the three railways after acquiring full ownership of the Soo Line in 1990 and purchasing the D&H in 1991. When this amalgamation was completed during 1994, CP Rail System could offer integrated service

under one name over the whole network.

VIA Rail Canada

VIA Rail, Canada's national passenger rail company, provides intercity and transcontinental rail services. VIA Rail operates passenger trains over CN and CP tracks in eight provinces from Nova Scotia to British Columbia, providing transcontinental service between Halifax, Montreal/Toronto and Vancouver, high density service in the Québec-Windsor corridor and serves isolated communities in northern Quebec, Ontario, Manitoba and British Columbia.

Canada-U.S. passenger services are provided by AMTRAK, which operates between Montreal and New York. In conjunction with VIA Rail, AMTRAK operates through services between Toronto and New York and between Toronto and Chicago. Recently AMTRAK announced plans to start a new service between Seattle and Vancouver and to eliminate one of the Montreal-New York trains.

Class II Railways

Class II railways generally fall into one of four categories: regional railways carrying traffic originating almost entirely from mines and forests; lines belonging to subsidiaries of U.S. railways; short-line railways which are formed from the conveyance of unwanted trackage from a Class I railway to another operator; and terminal or switching railways carrying traffic to/from industries located on their lines to the main lines of Class I railways.

Regional Railways

The British Columbia Railway (BC Rail) operates a 2,224 kilometre route from North Vancouver to Fort Nelson in northeastern British Columbia. BC Rail is Canada's third largest railway in terms of tonnage and employees. The principal commodities moved by BC Rail are mining and forest products.

Provincially-owned Ontario Northland Railway (ONR) serves northern Ontario with a 925 kilometre system stretching from North Bay to Moosonee. Northern Ontario is also served by the Algoma Central Railway (ACR), which operates over 516 kilometres of line between Sault Ste. Marie and Hearst.

The Quebec North Shore and Labrador Railway Company (QNS&L), a heavy volume iron ore carrier, operates 576 kilometres of rail line in northeastern Quebec and Labrador.

A number of regional railways provide intercity passenger service. The QNS&L provides service from Sept-Îles to Schefferville and Labrador City. In Ontario, the ACR provides service between Sault Ste. Marie and Hearst while the ONR operates passenger-trains between North Bay and the northern points of Cochrane and Moosonee. The BC Rail provides service between Vancouver and Prince George.

Subsidiaries of U.S. Railways

Several major U.S. railways operate small amounts of track in Canada linking shippers to their networks in the U.S. Burlington Northern (BN), CSX Transportation Inc., Consolidated Rail Corporation (Conrail) and Norfolk Southern

operate in Canada over lines owned by them or under running rights agreements with CN or CP. BN operates 296 kilometres in British Columbia and Manitoba, reaching Vancouver, Nelson and Winnipeg. Conrail runs on 106 route kilometres in Quebec, from the New York-Quebec border to Montreal. In southwestern Ontario, CSX operates 267 kilometres, while Norfolk Southern operates 394 kilometres between Windsor and Fort Erie.

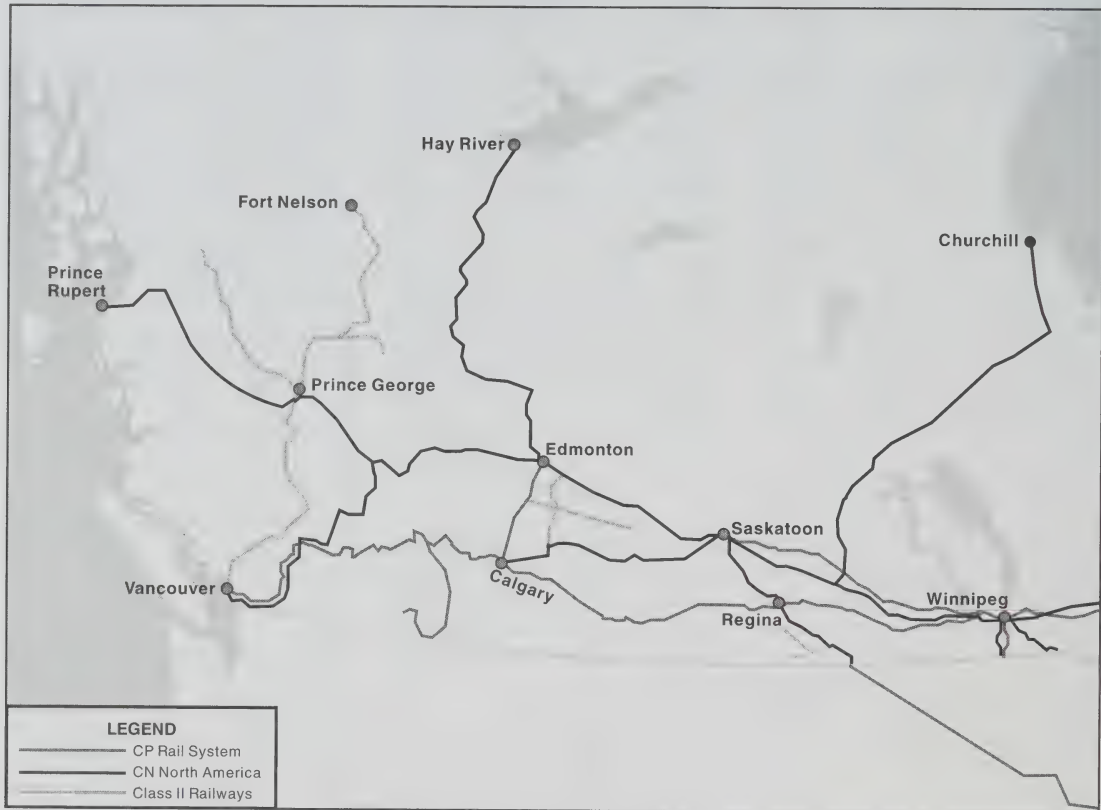
U.S. railways offer freight service on over 1,000 kilometres and passenger service on almost 500 kilometres of rail lines in Canada.

The National Railroad Passenger Corporation (AMTRAK) provides passenger service between Canada and the U.S. on 491 kilometres of CN's tracks, serving Montreal and Toronto from New York and Chicago.

Short-line Railways

During the last 15 years of railway network rationalization in North America, short-line railways have often been formed as an alternative to outright abandonment of uneconomic track. In the U.S., which has a much longer history of short-line railway formation than Canada, 26 per cent of the railway network is now operated by short-line railways. With the restructuring of railways underway in eastern Canada, short-lines are playing an increasingly important role as a means to preserve parts of the

Figure 5.5
Rail Network in Western Canada (excluding branch lines)



Canadian railway network. As of early 1995, short-line railways have been established in six provinces. The location of these railways is shown in Figure 5.7.

In Alberta, the Central Western Railway became Canada's first short-line railway when it took over the Stettler subdivision from CN in 1986. Its trackage more than doubled in 1991 with the purchase of over 210 kilometres of track from CP.

In southern Saskatchewan, the Southern Rails Cooperative started

operating over 74 kilometres of abandoned track in 1990. Owned by grain producers, it hauls about 500 loads a year in a roadrailer (combined rail/highway trailer) pulled by a trackmobile.

In southwestern Ontario, in 1991 CN sold over 110 kilometres of track to the U.S. short-line managing company, RailTex, which operates as the Goderich-Exeter Railway.

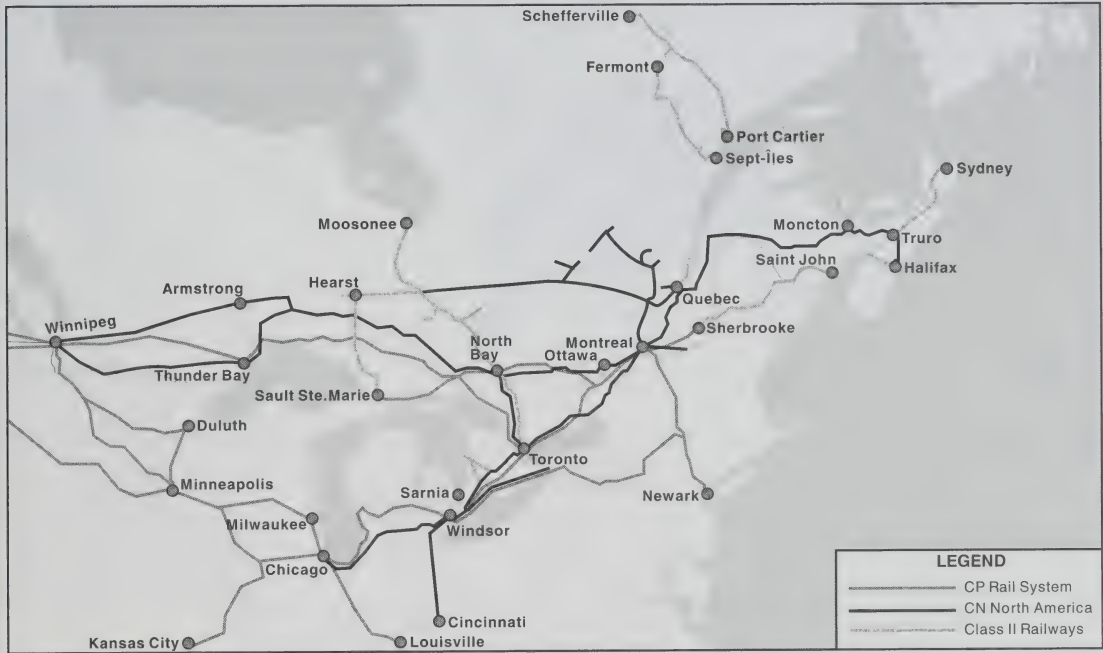
In August, 1994, a new short-line railway was created in Quebec when CN conveyed the 144-kilometre

Murray Bay subdivision to the Quebec Railway Corporation.

***Nine short-line
 railways now operate
 in six provinces.***

Moving further east, three new short lines came into existence early in 1995 when CP signed agreements with the J.D. Irving Company and Iron Road Railways for the takeover of rail operations between Saint John and Sherbrooke. The lines in question are the New Brunswick Southern Railway Company Limited (213 kilometres), the Eastern Maine

Figure 5.6
Rail Network in Eastern Canada (excluding branch lines)



Railroad Company (160 kilometres, all in Maine) and the Canadian American Railroad Company (297 kilometres).

The sale in August 1994 of the Dominion Atlantic Railway by CP to a group of Canadian and American investors created another new short-line, the Windsor and Hantsport Railway, which operates 93 kilometres of track between New Minas and Windsor Junction in Nova Scotia.

In 1993, the Cape Breton and Central Nova Scotia Railway (CB&CNS) commenced operations on 400 kilometres of rail line in Nova Scotia that formerly belonged to CN. This was RailTex's second venture into short-line operations in Canada.

Terminal and Switching Railways
Terminal or switching railways connect traffic to the main lines. In southwestern Ontario, the Detroit River Tunnel Company and the Niagara River Bridge Company are both 100 per cent owned by the CN/CP Niagara-Detroit Partnership. While the Niagara River Bridge Co. is jointly owned by both railways, CP has exclusivity over the Niagara Falls Bridge. Toronto Terminals Railway Company, jointly owned by CN and CP, services VIA Rail and GO Transit in Toronto. Essex Terminal Railway located in Windsor, Ontario does interswitching for both major railways. CN uses the International Bridge and Terminal Railway in Fort Frances, Ontario to transport traffic across the Canada-U.S. border. The Van Buren Bridge Company operates the

international bridge between St. Leonard, New Brunswick and Van Buren, Maine.

Size of Canadian Rail Industry

The Canadian rail industry is the third largest in the world in terms of route kilometres and it handles the world's sixth largest volume of freight over this network.

Canadian railway network third longest in the world.

Table 5.2 presents an overview of the Canadian rail industry, highlighting some operating indicators and showing some international comparisons. The foreign data are

from the International Union of Railways (IUR).

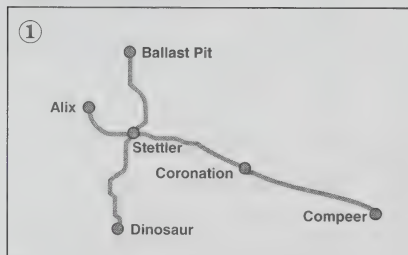
The table clearly shows that the North American railways are primarily freight operations, compared to their foreign counterparts.

Figure 5.7

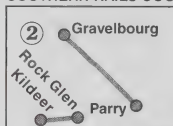
Short-Line Railways in Canada



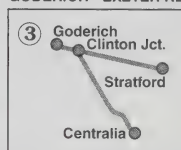
CENTRAL WESTERN RAILWAY



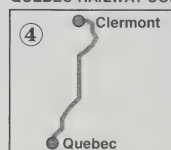
SOUTHERN RAILS COOP



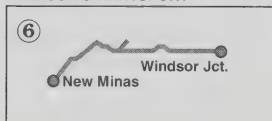
GODERICH - EXETER RLWY



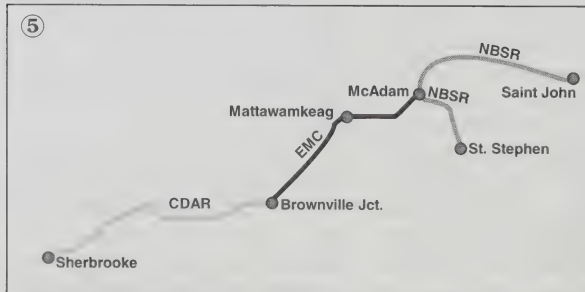
QUEBEC RAILWAY CORP.



WINDSOR & HANTSPORT



CANADIAN AMERICAN RAILROAD
EASTERN MAINE RAILROAD,
NEW BRUNSWICK SOUTHERN RAILWAY



CAPE BRETON &
CENTRAL NOVA SCOTIA

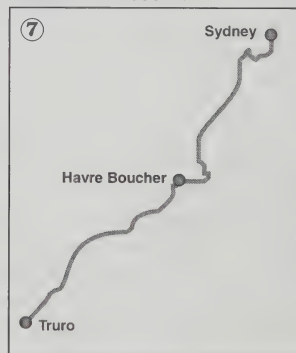


Table 5.2
International Railway Statistics - 1992

Country	Locomotives (000)	Passenger Cars (000)	Freight Cars (000)	Passengers (millions)	Tonnes (millions)	Staff (000)	Lines (000 kms)
Canada	3.4	1	118	4	265	62	85
U.S.A.	18.4	2	605	21	1,269	222	182
China	14.1	28	373	988	1,523	2,018	54
Japan	1.6	26	17	8,652	56	165	20
India	7.4	33	335	4,049	338	1,654	62
France	5.1	16	80	820	136	187	33
Germany	5.4	15	178	1,098	252	217	27
Ukraine	6.0	11	276	694	1,505	435	23

Source: Statistics Canada, International Union of Railways

Unfortunately, it is not possible to make a comparison with Russia as data is not available in the IUR publication. Due to similarities in geography and climate, a comparison would have been interesting.

COMPETITION

In response to competition, the railways make many changes in how they operate and market their services. This section examines how railway companies competed in 1994 in terms of service, alliances, infrastructure, equipment and prices. It ends with a description of the use made of pro-competitive regulatory provisions.

Service Initiatives

CN North America

In 1994, CN introduced a number of service-related initiatives to improve its competitiveness. The railway announced it was earmarking \$100 million for new information

technology, developed by the Santa Fe railway in the U.S., for scheduling service to customers. Called the Service Reliability Strategy, the new technology will replace systems that were designed in the late 1960s and were focused on train operations and car movements. The new system co-ordinates waybill information with train schedules and the railway's customer commitments.

In October 1994, CN announced a major restructuring of its marketing department. To improve service and strengthen customer relations, CN divided its marketing department into six business units: intermodal, automotive, forest products, industrial products, grain, and coal, sulphur and fertilizer. CN will assign an account manager to each of its major clients. The change will allow the railway to respond quickly to customers needs.

CN opened its new customer service centre in Winnipeg in March, 1995. The centre will use the latest

CN restructured its marketing department into six business units.

communications technology to provide a centralized point of contact for customers. CN employees will have computer access to details of customers' special needs and will use the system to administer car ordering, waybilling, account management and intermodal billing. In addition, customers can now use electronic mail service to exchange electronic data immediately with the railway at every step of the shipping cycle.

Partnerships with customers led to improved quality of service by CN. For example, a joint Noranda-CN Quality Action Team developed 27 recommendations to reduce cost and improve efficiency for Noranda. Chrysler developed a Carrier Quality Analysis System that measures such items as CN's product-damage levels, electronic data transmission capability and on-time performance.

CP Rail System

In 1994, CP also implemented innovative services to improve its competitiveness. A CP team designed and developed the business processes and supporting technology that comprise the Shipment Management System (SMS). Since the system became fully operational in 1994, shippers can receive more reliable dock-to-dock service and more competitive transit times.

During the year, CP also announced it would consolidate its nine Canadian customer service centres (CSC) in Winnipeg over two years. Customer service operations are to be phased in region by region and started in March 1994 with Manitoba. CP has already centralized its U.S. customer services at a CSC in Milwaukee.

CP is consolidating its Canadian customer service centres in Winnipeg.

In another effort to improve service to customers and minimize delays, CP developed an \$8 million computerized system that will dispatch its 5,000 locomotive engineers, conductors, brakemen and some yard crews to their daily assignments. When fully operational in 1996, the centre, located in Montreal, will replace 24 crew-calling bureaus across Canada. CN uses similar technology and has reduced its dispatch work to three centres: Moncton, Winnipeg and Edmonton.

Also in 1994, CP established a computer system with Revenue Canada that speeds the flow of new

motor vehicles into Canada. By receiving incoming shipment data up to five days in advance of arrival, Revenue Canada's shipment handling time at the border is reduced so that the goods move more quickly. The railway is also working to put in place a similar system with U.S. Customs to handle trains from Canada to the U.S. CN has similar agreements with Revenue Canada.

As a result of these and other steps to improve service, certain customers gave recognition to CP. A customer in Iowa awarded CP with the Superior Service Plaque, and Inland Steel honored CP with the Model Supplier award. CP's communications excellence was also recognized by the Association of Railroad Advertising and Marketing.

VIA Rail

During the year, VIA Rail improved its service in the Toronto-Windsor corridor by putting into service refurbished coaches and reducing travel times between cities in southwestern Ontario by up to ten per cent. The reduced travel times are the result of \$7.5 million worth of track and roadbed improvements made by CN to its lines. Train speeds increased to 153 kilometres per hour from 128.

VIA Rail joined the Gemini and Sabre computer reservation systems.

The railway company introduced other service incentives for its passengers. Travel agents are able to book seats on VIA's corridor services the same way they would book an airline seat, by using the

Gemini and Sabre systems. In 1994, VIA Rail also joined Worldspan, another computer reservation system used by airlines.

Also during 1994, VIA Rail announced a Business Suite pilot project on the Toronto-Montreal corridor. The new service, installed as part of the first-class coach, provides electrical outlets at each seat to allow passengers to use computers.

VIA Rail's service between Halifax and Montreal via Saint John (the Atlantic), which ran three times a week, made its final run on December 15, 1994. The next day, VIA Rail's Ocean doubled frequency between Halifax and Montreal from three days a week to six. VIA reached an agreement with SMT (Eastern) Ltd. to provide connecting bus service to customers in Saint John and Fredericton. Customers purchase only one ticket for combined bus-train travel, including baggage checking, to final destination.

VIA provides integrated bus-train intermodal travel in New Brunswick.

Alliances Among Firms

Another way of competing is to form alliances with other firms. Railways have entered formal alliances not only with other railways but with carriers from other transport modes.

Both CN North America and CP Rail System have entered several strategic and marketing alliances with U.S.-based railways and

trucking firms. These alliances extend their market deeper into the U.S. and Mexico, and facilitate seamless transportation services for rail freight and intermodal movement of goods. Joint rail-truck and rail-marine co-operation provides the fastest growing segment of business for CN and CP as intermodal transportation increases in the 1990s.

Rail/Rail Alliances

Both major Canadian railways have entered alliances with major U.S. and Mexican railways since the late 1980s. CN's rail partners include Burlington Northern (BN), Union Pacific, Atchison, Topeka and Santa Fe (SF), Conrail and CSX Intermodal. Another alliance is with Ferrocarriles Nacionales de Mexico, BN, and Protexa Burlington International, creating a tri-national network of services.

CP has an alliance with Norfolk Southern and its RoadRailer subsidiary, Triple Crown. In addition, in the fall of 1994, CP and CSX Intermodal announced a joint marketing agreement to launch the Iron Highway, a new intermodal system which targets short-haul intermodal traffic markets in the 500 to 1,100 kilometre range. The system consists of a 400 metre train with special locomotives at each end. The train is capable of splitting in the middle and lowering a ramp that can be used to drive trailers onto the train's flat cars. CP agreed to participate in the testing and operation, starting spring of 1995, of two Iron Highway trains between Toronto and Montreal, while CSX Intermodal will test two on its Chicago-Detroit line.

CP to test the short-haul intermodal Iron Highway system in 1995.

Working relationships with SF and Southern Pacific give CP access to transpacific marine traffic to and from ports in southern California. Early in 1994, CP entered a partnership (Golden Arrow Service) with four U.S. railways - Norfolk Southern, Springfield Terminal Railway, Green Mountain Railroad and Vermont Railway - to reduce transit times for carload shipments between Montreal and several southern and eastern U.S. destinations.

Rail/Truck Alliances

Rail/truck alliances are key to increased use of intermodal transport. Intermodal service partnerships with trucking firms are an important part of the railways' marketing strategy. Over the last few years, CN has formed partnerships with J.B. Hunt, APL Land Transport Services, KLLN, Winnipeg-based Kleysen and TransX.

In April 1994, CP formed an intermodal alliance with N. Yanke Transfer Ltd., a Saskatoon-based carrier that specializes in truckload freight hauling in both Canadian and U.S. markets. N. Yanke will deliver trailers and containers to CP intermodal terminals for shipment by rail to major cities in North America. This partnership is the first of its kind for CP, which previously marketed its intermodal services directly to shippers.

Rail/Marine Alliances

In January 1995, CP signed a long-term contract with Orient Overseas Container Lines (OOCL), a shipping company that provides weekly service between Vancouver and the Pacific Rim countries. CP will provide inland rail service from Vancouver to Toronto and Montreal. Traffic will include cargo moving on Canadian landbridge service between Asia and Europe via Vancouver to Montreal then on to OOCL's Montreal-Europe service.

In July 1994, Canadian Pacific Limited, parent company of CP Rail System and Canada Maritime Limited, a north Atlantic container shipping line, announced an agreement, subject to regulatory approvals, to purchase the container operations of the Cast Group, another north Atlantic container operator. In January 1995 the Agency granted approval of the proposed acquisition and the agreements were finalized on March 31, 1995.

Third-Party Logistics

In the United States, third-party intermodal contractors are part of a growing trend. Although their use is less common in Canada, both CN and CP are dealing with them for cross-border traffic. In Canada, railways do much of their own retailing, but marketing by their allies in the trucking sector is attracting some long-haul customers to rail. Truckers provide the pick-up and delivery service at either end of the long distance haul by rail.

Infrastructure and Equipment Improvements

To increase their ability to meet the competition in providing improved service to customers, both CN and CP invested heavily in infrastructure and equipment in 1994.

CN North America

During the year, CN ordered 18 Dash 9 locomotives valued at approximately \$35 million from GE Transportation Systems in Erie and ordered 26 diesel locomotives worth \$47 million from the Diesel Division of General Motors of London, Ontario. Technotransport of Montreal also received a contract from CN to rebuild ten SD-40 locomotives.

Both CN and CP placed orders for new locomotives and cars in response to high traffic volumes.

A strong demand for Canadian lumber in the U.S. prompted CN to place a \$7 million order for 100 73-foot centrebeam cars. The order was awarded to Trenton Works and will increase the CN fleet of these units to more than 1,400. The railway also increased the productivity of its 4,500-plus lumber flatcar fleet by reducing car cycles through improved routings. CN also began construction of a new lumber distribution terminal in Chicago during the year.

To reduce customer handling costs and improve productivity, CN placed a \$12 million order for 150 new high roof box cars to handle stacked paper rolls.

Both CN and CP redeployed covered hopper cars from other areas of their fleet to keep up with the large demand to transport grains and oilseeds in 1994.

CN increased its fleet of domestic containers and chassis in 1994 by leasing 855 new 48-foot containers and 660 new chassis.

Also in 1994, CN introduced EcoRail, a mini-train capable of carrying truck trailers over medium distances. Truckers back their trailers onto a bogie on the tracks and the trailer's wheels hang just above the track. A typical convoy consists of ten trailers pulled by a special locomotive that can travel up to 113 kilometres per hour. ECORAIL was tested commercially by CN for five months during the year. In early 1995, CN will further test the concept by moving trailers between Drummondville and Toronto.

CP opened the Windsor-Detroit tunnel enlargement in May 1994 and CN started using its new Sarnia-Port Huron tunnel in April 1995.

CN also made significant improvements to its intermodal terminals. CN and Emons Transportation Group built a \$2.9 million intermodal terminal in Maine to provide intermodal connections between Auburn and Chicago. The railway also upgraded its Vancouver intermodal terminal by increasing trailer and container storage and announced it will expand its

intermodal terminal at Brampton. Over the past 18 months, CN spent about \$19 million on equipment to upgrade the Brampton yard to serve the large growth in intermodal traffic. The new equipment includes five mobile cranes and four forklift trucks. Two loading tracks were also added at the terminal.

CN spent \$54.7 million this year on the St. Clair river tunnel. Tunnel boring began in Sarnia in 1993 and was completed in Port Huron in December 1994, over a distance of 1,870 metres. The \$190 million tunnel opened in April 1995 and reduced the transit times by up to 12 hours.

CP Rail System

Like CN, CP improved equipment and infrastructure. As part of a major program to purchase new and rebuilt diesel-electric locomotives over the next four years, the railway ordered 80 six-axle AC4400 locomotives from GE Transportation Systems. Delivery is expected to begin in the summer of 1995. Ten rebuilt units were also ordered.

To meet traffic needs, CP increased its fleet of grain hopper cars by purchasing 900 new cars that can carry a ten per cent heavier payload of 100 tonnes. As well, the new cars feature interior lining, double-hinged aluminum top hatches and premium unloading gates.

To improve service to the forest products industry, CP also spent \$1 million to modify 210 centre-beam bulkheads over the period 1992-1994. The modifications reduced the weight of the car but made it stronger. The changes also meant that a 72 kilometres per hour

speed restriction was lifted, permitting faster service and better utilization of cars.

CP Rail System spent \$18.8 million upgrading its Bridge Line Division (D&H). The intermodal terminals in Albany and Scranton were improved. Some of the other upgrades included new ties, ballast and rail, and double-stack clearances. Other CP Rail System improvements in the U.S. were made in Binghamton and at the Bensenville terminal near Chicago.

In May 1994, the first double-stack train from Montreal rolled through the newly enlarged Windsor-Detroit tunnel. Although the tunnel is jointly owned by CN and CP, CN was not involved in financing the enlargement. The project has improved service for customers by increasing the speed of traffic across the border, especially tri-level auto carriers, trailers-on-flatcars, high-cube boxcars and double-stack containers.

VIA Rail

VIA announced it will refurbish 33 stainless steel train cars purchased from across North America. The cars will be fitted with new heating and air conditioning systems. Multichannel audio units will also be installed in the seven first-class cars.

Railway Prices

Marketing innovations, alliances, improved infrastructure and new equipment all make the railways more competitive. But another way that railways compete is on price. The railways compete with not only other modes of transport but also

with each other. This has been especially true since the regulatory reform of 1988, which gave shippers new bargaining tools in their negotiations with the railways.

Railway prices are generally based on two principles; they are related to the costs of the carriers and to what the market can bear. In times of stiff competition, prices tend to reflect costs plus the minimum markup the carrier can live with. When competition wanes, prices tend to rise as high as the transported product can bear and still return a reasonable profit to the seller. While Canadian railways have faced both of these competitive environments, stiff competition has tended to predominate during the past decade. On one hand, other carriers have competed more vigorously. On the other, Canadian products are facing increased competition, in both domestic and export markets.

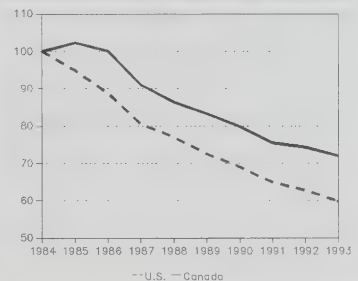
These changes have put downward pressure on the average revenue earned from carrying traffic. The standard measure of railway freight output is the tonne-kilometre: the carriage of one tonne of goods on a distance of one kilometre. Compared to 1987, railway revenue per tonne-kilometre (R/TK) in 1994 went down in real terms by some 22 per cent. Even though such factors as length of haul and traffic mix affect the average R/TK, lower real prices are the main cause of a decline of this magnitude.

In the U.S. railways have also had to cope with much lower average R/TK. According to the Association of American Railroads (AAR), the average R/TK for U.S. railways went down by over 40 per cent from 1984

U.S. railway prices have dropped more than Canada's since 1984, but Canada's railway prices have dropped compared to major product selling prices.

to 1993. For Canadian railways, the corresponding figure is 28 per cent. Figure 5.8 depicts these trends. This difference is caused partly by the later date in Canada of regulatory reform, which made competition stiffer. CN and CP show no significant differences in the amount of reduction in average R/TK over this period.

Figure 5.8
Freight Revenue per Tonne-Kilometre in Constant Dollars (1984 = 100)



Source: CN, CP, AAR

Another comparison is with the changes in the selling prices of the major products carried by Canadian railways. Statistics Canada publishes price indices for a large variety of industrial products and raw materials. Individual rail and product price indices of 18 of the major non-grain commodities carried by Canadian Class I railways

were compared for the period from 1986 to 1992. These 18 commodities account for about half of the non-grain tonnage carried by CN and CP. In every one of the 18 comparisons, the index of the railway average revenue per tonne-kilometre was less than the index of the industry product or raw material selling price.

The 18 commodities were ranked in descending order according to the total change in their prices from 1986 to 1992. Table 5.3 compares the changes in the product and rail prices for the top, middle and bottom third of the 18 ranked commodities. While the six commodities whose prices increased the most had an average price increase of 19.2 per cent from 1986 to 1992, the average rail R/TK for these same six commodities went down 3.8 per cent over the same period. This may be because the rate negotiators for the railways were not as used to negotiating in a highly competitive environment as the negotiators for the shippers. It could also reflect, in part, the influence of international exchange rates on the selling price of many of the products carried by railways in Canada.

Confidential Contracts

Before confidential contracts were introduced in 1988, all railway freight rates had to be published in open tariffs. Shippers knew what other shippers were paying and railways knew what other railways were charging. Competitors in other modes also knew what was being charged. This greatly narrowed the scope for negotiations between the parties. With confidential contracts, the results of price negotiations no longer have to be openly published. Shippers and railways can bargain just like any other commercial parties and tailor agreements to their specific needs.

Commercial grain rates in the U.S. were higher than WGTA-regulated rates in 1994.

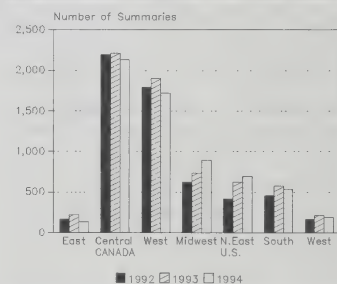
Confidential contracts proved to be a very popular innovation soon after their introduction in 1988. Before long some 70 per cent of railway non-grain traffic moved under contract. The number of new contract summaries filed with the Agency rose each year, reaching the

6,000 level in 1991. Since then, the number has changed little. In fact, the first decline in the number of summaries filed with the Agency came in 1994 when the number dropped to 5,996 — a decline of three per cent from the year before.

As before, in 1994 CN and CP filed most of the summaries (over 97 per cent), with 83 per cent filed by CP alone. Although CN uses contracts about as much as CP, CN files fewer individual contract summaries as a result of its marketing approach which emphasizes master contracts covering much of a customer's traffic.

As in past years, the six major industry sectors using confidential contracts were: chemicals, pulp and paper, lumber and wood products, hazardous materials, food products and petroleum and coal products.

Figure 5.9
Number of Confidential Contract Summaries by Origin



Source: National Transportation Agency

Table 5.3
Product Prices and Rail Rates

Commodity Groups	% Change in Product Price 1986-1992	% Change in Rail R/TK 1986-1992
Top Six	19.2	-3.8
Middle Six	6.0	-3.3
Bottom Six	-2.5	-9.7

Source: Statistics Canada, CN, CP

Although the number of contract summaries filed declined by three per cent in 1994, contracts for traffic originating in the U.S. increased by nine per cent. This probably reflects the continuing expansion of transborder trade under NAFTA. The origin areas in the confidential

RAIL RATE COMPARISON - COMMERCIAL vs WGTA-REGULATED

Rail rates for WGTA export grains are set annually through a regulatory process administered by the Agency. The rates are cost-based and set out in a distance-related rate scale. WGTA reform legislation indicates that the rail rates for WGTA grain movements will continue to be regulated during a transition period beginning August 1, 1995 through to the year 2000, when rates would be governed under the provisions of the NTA, 1987. In other words, rates would be set through commercial negotiation and would reflect what the market would bear after the transition period.

The following illustrates how current WGTA grain rates compare to commercially negotiated grain rates in some markets in Canada and the U.S.

Commercial rail rates for grain movements between Calgary and the Fraser Valley exceed the WGTA rate (for that distance) by 30 per cent. Furthermore, rail rates for Burlington Northern movements just south of the border from U.S. prairie points to west coast ports exceed WGTA rates for similar distances by 70 to 75 per cent. Commercial grain movements from Edmonton to Tulare (just south of Los Angeles) exceed WGTA rates by 46 per cent. All rates reflect single car shipments and are based on an exchange rate of \$1.35. Similarly, export rail rates on grain from Winnipeg to New Orleans exceed the WGTA rate to Vancouver by 20 to 33 per cent, in spite of the low rail rates charged between Minneapolis and New Orleans to compete with Mississippi barges.

While it is recognized that selling price differentials exist for grain sales through the various ports which may influence shippers to accept higher transportation charges to gain such sales and prices, the above comparisons indicate that rail rates in today's commercial environment are higher than WGTA-regulated rates.

Regulated rates are based on the railways' costs plus a contribution. The railways' cost base for carrying WGTA grain is reviewed by the Agency every four years, with price indices used in rate development for the in-between years. The last year for which a costing review was done was 1992. This review showed that there had been a reduction in the railways' WGTA grain-related costs. The result of this calculation of lower costs is a reduction of about 7.7 per cent in the 1994/95 WGTA rate for the average length of haul compared to what it would have been under indexed costs.

contract summaries filed with the Agency in recent years are presented in Figure 5.9.

Ontario is the most frequently named province of origin for the 1994 contracts, with 22 per cent, followed

*Confidential contracts
show an increasing
proportion of U.S.
origins.*

by Quebec, with 17 per cent and Alberta and British Columbia with 15 per cent each. For the U.S., 39 per cent originated in the Midwest; 30 per cent in the Northeast; 23 per cent in the South and eight per cent in the West.

Competitive Access and Mediation

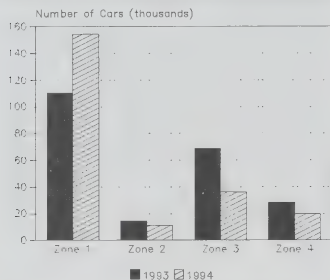
The NTA, 1987 encourages competition. Shippers gain from its provisions for competitive access such as interswitching and competitive line rates. Under the Act, mediation and final offer arbitration are some of the mechanisms available to both shippers and railways to help resolve disputes.

A shipper located on one railway can have its traffic interchanged to another railway for the line-haul, when the origin of a movement of its traffic is within a radius of 30 kilometres of an interchange. The Agency prescribes the maximum rates to be charged for the interswitching move. Similar provisions apply to terminating traffic.

CN and CP interswitched 221,679 cars in Canada in 1994, a number virtually unchanged from 1993. Figure 5.10 gives a breakdown by zone of interswitching activities in 1993 and 1994 for CN and CP combined. The Agency has established four distance zones for setting maximum rates; zone 1 covers distances up to 6.4 kilometres, zone 2 distances over 6.4 and up to 10 kilometres, zone 3 distances over 10 and up to 20 kilometres and zone 4 over 20 and up to 30 kilometres. In 1994, the number of cars interswitched in Zone 1 by both

railways increased 40 per cent from the previous year. In all other zones, the number went down. Zone 1 accounted for 70 per cent of all cars interswitched by both railways in 1994, compared to 50 per cent in 1993.

Figure 5.10
Cars Interswitched
by CN and CP



Source: CN, CP

Any shipper who is local to one railway and is located beyond interswitching limits can ask its local railway to establish a competitive line rate (CLR) for moving its goods to a competing railway. The shipper must have reached an agreement on rates and other conditions with the competing railway. The CLR applies from the point of origin or destination of the traffic to the nearest interchange with the competing railway. If the parties cannot agree on the CLR, the shipper can ask the Agency to establish the CLR using legislated guidelines.

***Class I railways in
Canada interswitched
over 220,000 cars in
1994.***

There were no applications to the Agency for a CLR in 1994. Although the Agency has been

approached for the determination of a CLR by only two shippers since 1988, the existence of CLR's as a bargaining tool has been beneficial to shippers in their negotiations with railways as evidenced by the Agency Shippers' Surveys.

Shippers and carriers can use mediation, public investigations and final offer arbitration provided under the *NTA, 1987*, if they are unable to reach agreement on the terms and conditions for the transport of goods. Although there has been little direct use of these provisions, their existence as a recourse has had a positive impact on shippers' negotiations with railways. Throughout the year, the Agency provided informal mediation services to deal with a variety of matters.

Two applications for final offer arbitration were received in 1994. The first was made by Gregg River Resources Ltd., in respect of the rate charged by CN for coal movements from Hinton, Alberta to Roberts Bank, B.C. The arbitration ended in August after CN and Gregg River reached an agreement on the rate. The second application was made by Sultran on December 29 and was carried forward into 1995. It concerned the rate that CP will charge for moving sulphur from Alberta to Vancouver for export. This arbitration ended in January 1995 after the parties agreed on a rate.

OPERATIONAL PERFORMANCE

This section examines the performance of the Canadian railway industry in 1994. An analysis of changes in railway traffic is followed by a discussion of railway operations, expenses and productivity. The section concludes with an analysis of railway financial results.

Railway Traffic

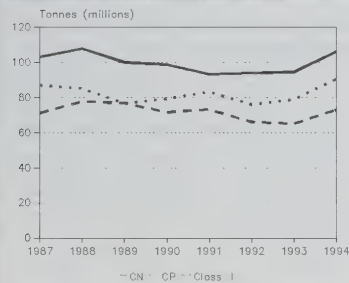
Freight Traffic Overview

Railway traffic carried in Canada in 1994 increased 12.8 per cent over the previous year, reaching 270 million tonnes. This total includes 253 million tonnes loaded in Canada and 16.7 million tonnes received from U.S. connecting railways. The eight commodity groups shown in Tables 5.4 and 5.5 comprised over 75 per cent of the traffic loaded in Canada. The last part of this section describes the products that form these groups.

***Freight traffic up
13 per cent to reach
270 million tonnes.***

Figure 5.11 displays the total tonnage carried on CN, CP and Class II railways for each year from 1987 to 1994. Although Class II railways usually account for 25 to 30 per cent of total tonnage, their smaller networks generate much fewer total tonne-kilometres, and their freight revenues are much less, only about ten per cent of the Canadian total.

Figure 5.11
CN/CP/Class II Tonnage



Source: Statistics Canada

CN's share of total tonnes was 39 per cent, CP's share was 34 per cent and Class II's share was 27 per cent.

CN

In 1994, of approximately 106 million tonnes of CN traffic, the railway carried seven million tonnes received from U.S. connections, another seven million tonnes of intermodal freight and 92 million tonnes of Canadian carload traffic. The 12 per cent increase over one year represents a big jump over 1993 when the year-over-year increase measured only one per cent.

Figure 5.12 shows the main commodity groups carried by CN in 1994 and 1993. These groups account for the majority — 70 per cent — of CN's 1994 traffic loaded in Canada. Coal is the only commodity showing less traffic — a drop due to reduced coal shipments to a major customer served by CN.

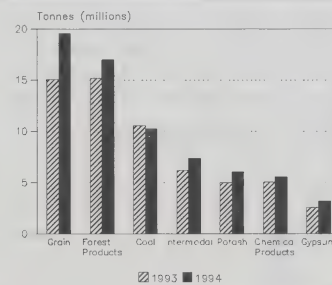
Table 5.4
Distribution of Railway Traffic Loaded in 1994

Commodity Group	Total	CN	CP	Class II	1993-1994
<i>million tonnes</i>					<i>% change</i>
Grain	39.1	19.6	18.8	0.7	24.2
Iron Ore	37.6	—	—	37.6	19.7
Coal	36.6	10.3	17.3	9.0	8.0
Forest Products	32.7	17.0	6.5	9.2	8.9
Intermodal	15.3	7.4	7.1	0.8	25.7
Potash	12.8	6.1	6.7	—	24.9
Chemicals	10.6	5.6	3.5	1.5	4.2
Sulphur	5.2	1.9	2.7	0.6	17.2
Total Loaded	253.0	99.0	82.0	72.0	12.7
Received from U.S.	16.7	7.1	8.6	1.0	15.2

Note: Each movement marked by " — " is under 20,000 tonnes.

Source: Statistics Canada

Figure 5.12
CN Tonnage by Commodity



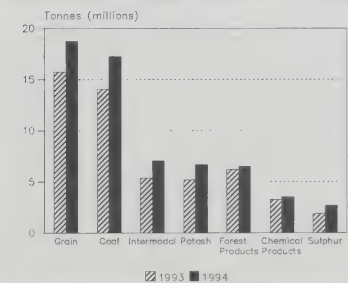
Source: Statistics Canada

CP

In 1994, CP carried about 91 million tonnes of traffic — an increase of 15 per cent over 1993 and a sharp rise from 1993's year-over-year

increase of four per cent. Total 1994 traffic comprised nine million tonnes from U.S. connections, seven million tonnes of intermodal freight and 75 million tonnes of Canadian carload traffic.

Figure 5.13
CP Tonnage by Commodity



Source: Statistics Canada

Table 5.5
Changes in Railway Traffic Loaded: 1993 to 1994

Commodity Group	Total	CN	CP	Class II	1994
		% change			million tonnes
Grain	24.2	29.7	19.3	14.8	39.1
Iron Ore	19.7	0	0	19.7	37.6
Coal	8.0	-2.8	22.3	-1.4	36.6
Forest Products	8.9	12.2	3.7	7.0	32.7
Intermodal	25.7	19.5	32.3	30.2	15.3
Potash	24.9	20.4	29.1	0	12.8
Chemicals	4.2	8.4	4.3	-9.4	10.6
Sulphur	17.2	3.8	43.8	-17.8	5.2
Total Loaded	12.7	12.1	14.3	12.0	253.0
Received From U.S.	15.2	12.5	18.2	9.9	16.7

Source: Statistics Canada

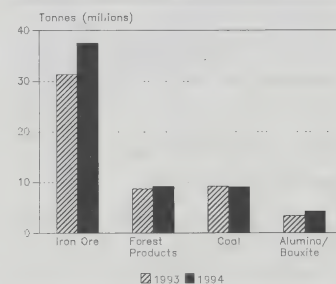
Figure 5.13 shows the main commodity groups carried by CP in 1994 and 1993. These commodities represent 76 per cent of CP's tonnes loaded in Canada in 1994.

Class II Railways

Total tonnes carried by Class II railways climbed by 12 per cent in 1994 from 1993 totals. In 1994, Class II railways carried about 73 million tonnes made up of one million tonnes from U.S. connections, one million tonnes of intermodal freight and 71 million tonnes of Canadian carload traffic. In contrast, total tonnes of traffic carried in 1993 dropped by one per cent from the year before.

Figure 5.14 shows the main commodity groups carried by Class II railways in 1994 and 1993. These four commodities account for over 83 per cent of the tonnage loaded by Class II railways in Canada in 1994.

Figure 5.14
Class II Tonnage by Commodity



Source: Statistics Canada

Close to two-thirds of Class II rail traffic is moved by three railways; BC Rail, the Quebec North Shore and Labrador Company (QNS&L) and the Quebec Cartier Railway. BC Rail traffic depends mainly on four commodities: coal, pulpwood chips, lumber and woodpulp, which accounted for 80 per cent of their traffic. For each of QNS&L and the Quebec Cartier Railway, their staple commodity, iron ore, made up over 95 per cent of traffic. Other noteworthy Class II railway movements are alumina and bauxite by the Roberval and Saguenay and coal by the Devco Railway.

Major Commodity Groups

This section identifies the composition of the major commodity groups, describes their handling characteristics, and explains why their traffic volumes loaded by railways in Canada changed in 1994.

Grain, chiefly wheat, barley and canola, moves in covered hopper cars mainly from the Prairie Provinces to western and eastern ports for export.

Grain traffic by rail increased 24 per cent in 1994. While wheat shipments rose by 20 per cent, other grains (including barley and canola) showed a booming 35 per cent increase in spite of a seven per cent drop in overall grain production in 1994.

Several factors pushed up grain traffic. An early fall harvest in 1994 meant there was enough grain to fill export needs. The higher quality of the 1994 crop made Canadian grains more attractive in export markets. Weather problems in competing countries, particularly a drought in

Australia, proved to be a plus for Canadian grain exports. The grain export drive also got a boost when the supply of rail cars proved adequate in spite of a shortage earlier in the year.

Iron Ore, composed of iron ore and concentrates, moves in hopper cars, and is shipped from Labrador to the Sept-Îles area for pelletising and export or shipped to and used in Ontario.

Higher demand by the steel industries of Europe and the U.S. increased iron ore traffic by 20 per cent.

Coal has two main uses, metallurgical and thermal. The former is steel-making; the latter power generation. Coal usually moves in unit trains of 100 tonne open top gondola cars from coal fields in Alberta and British Columbia to Pacific ports for export or to Ontario.

Coal shipments by rail increased by eight per cent in 1994 while preliminary figures show production up six per cent. Export markets accounted for most of the increases, taking 12 per cent more coal than the year before. Among Canada's major foreign customers for coal in 1994, Japan, Brazil and the U.S. accounted for 60 per cent of the increased exports. Metallurgical coal shipments were up as Japanese steel production for the second half of 1994 was above forecasted levels.

The **forest products** group is composed of lumber, pulpwood chips, woodpulp and newsprint paper.

Lumber is carried in bulkhead flat cars from the sawmills of British Columbia and eastern Canada to distribution centres across the continent.

Rail shipments of lumber in 1994, at 9.7 million tonnes, increased four per cent from the previous year, with Canadian production up three per cent. Fairly robust housing growth in the U.S., a restricted supply of U.S. lumber due to environmental concerns (spotted owl), and the low value of the Canadian dollar, pushed up the demand for building materials, especially lumber and other wood products.

Pulpwood Chips are carried in box cars from loading centres in B.C. and eastern Canada to pulp and paper mills.

The tonnage moved in 1994, some 9.5 million tonnes, was up 18 per cent because the chips are feedstock for the production of woodpulp, which increased considerably.

Woodpulp is unusual because over half of Canadian production does not enter the transport stream but is converted into newsprint paper within integrated pulp and paper mills. The woodpulp that is transported goes mostly by rail in specialized box cars. More than half the rail traffic goes to the U.S., with about another 20 per cent destined overseas.

In 1994, rail shipments of woodpulp, at 8.8 million tonnes, were up 13 per cent over 1993. Offshore exports jumped 23 per cent in 1994, the result of more woodpulp exported to the United Kingdom, other Western European countries, Latin America

and Japan. Woodpulp shipments to the U.S. were up five per cent from the previous year. A lower Canadian dollar also contributed to the increase in exports.

Newsprint paper is shipped in specialized box cars. Rail carried about half the volume of shipments in 1994. Newsprint paper moves mainly from mills in eastern Canada to U.S. markets.

In 1994, newsprint paper shipments by rail reached 4.8 million tonnes. A strong international economic recovery combined with a tight world newsprint paper market increased Canadian exports. Volume to the U.S. was up two per cent while offshore exports were up ten per cent.

Intermodal traffic increased more than any other major traffic segment in 1994.

Intermodal transportation moves freight in either truck trailers (TOFC) or containers (COFC) on railway flat cars. Now the North American rail industry's fastest growing traffic segment, it attracts a large variety of manufactured goods and semi-finished materials, in both the domestic and foreign trades.

About 75 per cent of 1994 intermodal traffic for CN and CP consisted of container movements. Both railways enjoyed substantial growth in intermodal traffic in 1994 compared to 1993, as CN's increased by 19 per cent while CP's increased by 31 per cent. All of the increase was due to container traffic.

Potash moves in covered hopper cars, mainly from Saskatchewan to the U.S. and to west coast ports for export. New Brunswick accounted for about 12 per cent of Canadian production in 1994.

Strong sales to offshore markets and improved export levels to the U.S. increased rail potash traffic by 25 per cent from 1993 to 1994. Favorable weather conditions and increased planting of corn produced a strong U.S. demand for potash. Increases were also recorded in potash traffic to Asia, where Canadian exports to China reached record levels.

Chemicals move primarily in tank cars and cover a wide gamut of products.

In 1994, the 10.6 million tonnes of chemical products moved by the railways represented a 4.2 per cent increase over the year before. Strong economic growth enjoyed by North America in 1994 caused the change.

Sulphur moves in gondola cars and about 60 per cent of Canadian production is exported, mainly to overseas markets.

Sulphur rail shipments rose by 17 per cent in 1994. Lower sales to the U.S. were more than offset by a significant increase in offshore exports. Sales improved in Brazil, Oceania and China. Sulphur production increased five per cent in 1994.

Major Regional Variations

Figure 5.15 shows graphically the railway traffic patterns for major regions of Canada. Based on 1993 CN and CP data, each map displays, for traffic originating in each of the

Figure 5.15
**Destinations for 1993
CN and CP Traffic Loaded in**

British Columbia



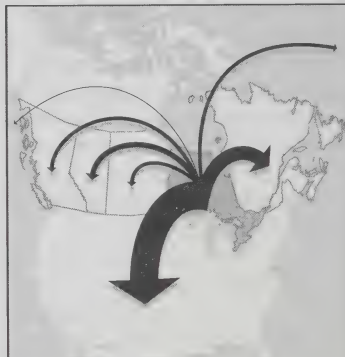
Saskatchewan and Manitoba



Alberta



Ontario



five regions, the extra-regional destinations of the traffic. The destinations for any specific region comprise the other four Canadian regions, the U.S., exports through western ports and exports through eastern ports.

The traffic volumes from each region are approximately as follows: British Columbia, 28 million tonnes, Alberta, 36 million tonnes, Saskatchewan and Manitoba, 37 million tonnes, Ontario, 21 million tonnes and Quebec and the Atlantic Provinces, 19 million

Quebec and Atlantic Provinces

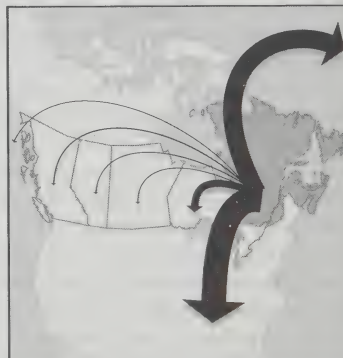
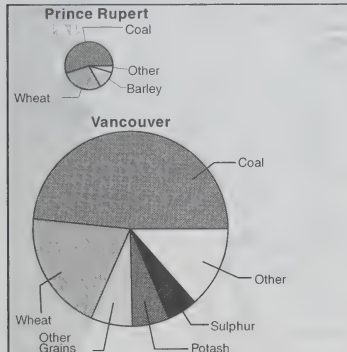


Figure 5.16
Export Traffic for 1993
Carried by CN and CP to

West Coast Ports



tonnes. The maps clearly show the importance of transborder and overseas trade to all regions of Canada.

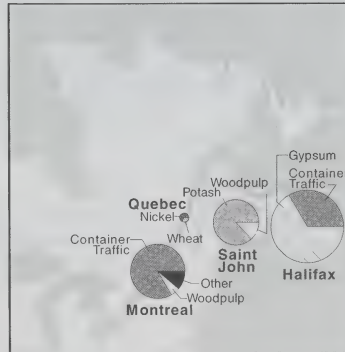
Figure 5.16 gives an indication of export traffic carried by railways to major Canadian ports. The maps are based on CN and CP data for 1993. Although each of the pie charts is based on the same scale, allowing a true comparison of the ports, the background scales for west and east coast ports are different.

There is a great variation in port size. For export through Vancouver, CN and CP carried 43.5 million tonnes, Prince Rupert, 10.7 million tonnes, Halifax, 2.4 million tonnes, Montreal, 1.8 million tonnes, Saint John, 1.5 million tonnes and Quebec, 0.3 million tonnes. The maps also show the main commodities carried to each port by the railways.

Passenger Traffic

In 1994, revenue-passenger traffic for VIA Rail rose 0.4 per cent, to

East Coast Ports



more than three and one-half million passengers.

On VIA's eastern long-distance services between Montreal and Halifax, both ridership and revenue rose slightly. The eastern services carried close to 262,000 revenue-passengers and earned \$18 million in revenue. VIA's services in the Quebec City-Windsor corridor continue to attract the highest ridership and generate the highest revenues. Corridor services carried over three million revenue-passengers during 1994, representing 84 per cent of VIA's total, and earned approximately \$117 million in revenues. While the number of revenue-passengers using VIA's western transcontinental service remained fairly constant in 1994, revenues increased by 10 per cent to \$30 million.

VIA carried more than 3.5 million passengers in 1994.

Figure 5.17 shows VIA's network and the number of trains per week and passengers arriving and departing at each of the major cities served in 1993. The numbers represent the total of both arriving and departing trains and passengers.

Railway Operations

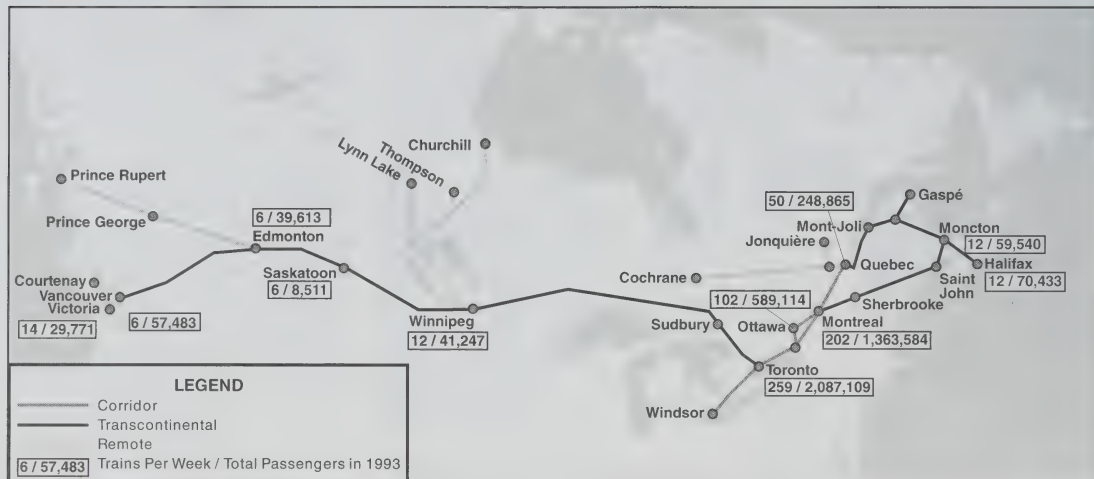
In 1994, freight traffic carried by Canadian railways went up a very respectable 13 per cent. In fact, since 1980 the tonne-kilometres carried by CN and CP combined has increased in all but four years, with the result that in 1994 traffic was 28.4 per cent higher than in 1980. Not only did the railways carry more tonnes, but they carried them over longer distances: more than fifteen per cent longer on average.

Since 1988, the railways have operated shorter and faster trains, partly in response to increasing competition. They have continued introducing higher capacity equipment, increasing the weight of the average carload over the past decade by over six per cent.

Since 1987, CN and CP have reduced employment by 32 per cent and increased output per employee by 59 per cent.

The railways operate by co-ordinating inputs of labour, equipment and fuel to move goods. Unlike traffic, which has increased, the use of inputs has gone down. Compared to 1987, in 1994 the average number of employees went

Figure 5.17
Via Rail Network



Note: The eastern trans-continental service between Montreal and Halifax (via Sherbrooke and Saint John) was discontinued on December 17, 1994.

down 32 per cent; the number of locomotives in service was down 11 per cent; and 15 per cent fewer freight cars were used. These reductions could only have resulted in increased productivity.

Canada's railways, after those of the U.S., are among the most productive in the world, and they are continuing to increase their productivity at a respectable pace. Compared to 1987, in 1994 output per employee went up 59 per cent, per locomotive around 20 per cent, per freight car about 27 per cent and per litre of fuel around ten per cent.

Table 5.6 summarizes some of the most important changes in the railways' operating and financial environment during the period from 1987 to 1994. The data are presented in the form of averages of annual percentage changes. The table also presents some data on

overall Canadian productivity and compensation.

By improving productivity, the railways have reduced their cost of doing business. From 1987 to 1994, railway expenses (excluding restructuring charges in 1991 and 1992) in constant dollars per tonne-kilometre of freight carried declined at an average annual rate of 3.40 per cent. (It is not possible to separate freight from non-freight expenses.) The average annual reduction in revenues in constant dollars per tonne-kilometre during the same period was 3.50 per cent, indicating that railways were able to reduce their expenses almost as rapidly as their decline in revenues. In other words, users of rail services have been able over the 1987 to 1994 period to benefit from railway productivity improvements.

Productivity improvements could have also benefitted shareholders

A large part of the benefits of railway productivity gains have been translated into lower charges to users.

and employees. For the latter, between 1987 and 1994 rail employment went down by 32 per cent. However, the issue here is whether railway employees have seen a deterioration or an improvement in their remuneration over the period. The average hourly salary of railway employees increased in real terms over the 1987 to 1994 period at an average annual rate of 1.23 per cent. This is to be compared to a 1.18 per cent real annual average increase in employee compensation per hour over the period 1987 to 1994 within the overall Canadian economy. As Table 5.6 shows, there

Table 5.6
CN and CP Combined Operating and Financial Data
Averages of Annual Percentage Changes: 1987-1994

	Annual Changes
Revenue per tonne-kilometre (1986\$)	-3.50
Expenses per tonne-kilometre (1986\$)	-2.82
(includes restructuring charges)	
Expenses per tonne-kilometre (1986\$)	-3.40
(excludes restructuring charges)	
Tonne-kilometres per locomotive	2.85
Tonne-kilometres per freight car	3.66
Tonne-kilometres per litre of fuel	1.41
Fuel cost per litre (1986\$)	-2.73
Tonne-kilometres per employee	7.05
Railway salary per hour (1986\$)	1.23
Canada total output per employee	0.66
Canada total compensation per hour (1986\$)	1.18

Source: CN, CP, Statistics Canada

is a much wider gap between railway and other employees when output per employee is compared.

As for the shareholders, before tax income in 1986 dollars declined from \$503 million in 1987 to \$451 million in 1994. Canadian Pacific Limited's shareholders continued to receive dividends all through the period, albeit at a reduced rate in the most recent years of a recession and a tough recovery.

It thus appears that shareholders and employees captured a part of the benefit of the cost reductions yielded by the improved railway productivity from 1987 to 1994.

Financial Results

Although Canada's recession ended in the middle of 1991, when the gross domestic product stopped

declining, because of the slow recovery, Canada's gross domestic product did not climb back to its pre-recession level until 1994. The recession and subsequent slow recovery affected many industries, including transportation. However, the transportation sector was not as bad off as some of the others. A study on corporate performance published by Statistics Canada identifies the transportation sector as only moderately cyclical in terms of sensitivity of operating profits to economic recessions. The transportation sector is certainly more cyclical than industries like food and telecommunications, but less cyclical than such major industries as forest products, transportation equipment and ferrous and non-ferrous metals.

Revenues

Although railway revenues (in real terms) have declined faster than their expenses during the past five years, much of the weakness shown in their financial ratios has been caused by the labour force restructuring charges that CN and CP included among their operating expenses in 1991 and 1992. Although rail revenues remained virtually unchanged in 1993 compared to 1992, tight cost control and the absence of restructuring charges made the financial performance look much better.

In 1994, continuing tight control over costs and the burgeoning economy led to an 10 per cent increase in freight revenues, which reached their highest level since 1988. Together, these two factors gave CN and CP a combined 1994 operating income of around \$790 million and an after tax income of \$422 million. The railways' operating ratios improved as well, with the combined ratio dipping below 0.90 for the first time since 1988. Table 5.7 shows recent financial results in current dollars, separately for CN and CP.

***CN's and CP's
combined operating
income more than
doubled to
\$790 million in 1994.***

Although total rail revenues have dropped substantially compared to the years before 1988, freight revenues have declined relatively much less than passenger revenues. The latter, composed mainly of services provided to VIA Rail, went

Table 5.7

Financial Results for CN and CP (\$ Millions)

CN	1988	1990	1992	1994
Operating Revenue	3,781	3,385	3,440	3,690
Operating Expense	3,297	3,305	4,135	3,267
Operating Income	484	80	(695)	423
Net Income (Loss)	(13)	(77)	(908)	271
Operating Ratio	0.872	0.976	1.202	0.885
CP				
Operating Revenue	2,717	2,488	2,338	2,735
Operating Expense	2,312	2,212	2,593	2,368
Operating Income	405	276	(255)	367
Net Income (Loss)	224	164	(193)	151
Operating Ratio	0.851	0.901	1.109	0.866

Source: CN, CP

Table 5.8

CN and CP Combined Financial Data

	Average Annual Percentage Changes: 1987-1994 (in real terms)
Freight Revenues	-2.29
Passenger Revenues	-14.85
Other Rail Revenues	-1.92
Total Rail Revenues	-2.57
Ways & Structures Expenses	-2.22
Equipment Expenses	-3.99
Rail Operation Expenses	-1.55
General Expenses (includes restructuring)	2.46
Total Rail Expenses	-2.01

Source: CN, CP

down by 70 per cent from 1987 to 1994. The decline in passenger revenues, of course, is not related to regulatory reform but to first, the

government's decision to reduce massively the scale of VIA Rail's operations in January of 1990 and second, VIA's decision to start

providing many services on its own instead of purchasing them from CN and CP. Table 5.8 shows some of the changes in real railway revenue and expense data, presented as averages of annual percentage changes from 1987 to 1994.

Investment

The amount of CN's and CP's capital investments increased in 1994 to its highest level since 1988. While the lower amounts of investments from 1989 to 1993 were no doubt due in part to reductions in railway net income, it also partly reflects the fact that the railways had invested quite intensively in the years before this period to position themselves for the new competitive environment after 1988.

The reduced capital investment since 1988 also occurred during a time when the focus of railway management was on labour costs. For several years, it appears that the railways considered investment in labour force reductions to have more of an impact on productivity than capital investments.

***Railway capital
investment in 1994
was at its highest
since 1988.***

Financial Ratios

Investors place much stock in financial ratios of companies. Using publicly available information, it is possible to compare the financial ratios of Canadian railways against some of the largest North American corporations. Over the past five years, figures for the average of net income after taxes as a percentage of shareholders' equity, as a percentage

U.S. Railway Capital Investments

It is generally accepted that companies make higher capital investments when they get a higher return on investment (ROI) from their operations. However, long term data from the U.S. comparing gross capital outlays to the rates of return on net property investment for Class I railways show no clear relationship. This is true whether the capital outlays are compared to the ROI in the same year or in the one or two previous years. This lack of an apparent relationship applies also when the amount of new investment is compared to the gap between the ROI and the U.S. railways' cost of capital as determined by the Interstate Commerce Commission. It is unfortunate that the presence of only one major privately-owned railway in Canada prevents a similar analysis here.

of total assets, and as a percentage of operating revenue, show that Canadian Class I railways are within a few percentage points up or down of such companies as Cominco, Chrysler, Petro Canada, Dofasco, and Abitibi-Price. It is clear that the fortunes of Canada's railway industry rise and fall with those of some of its major clients.

RAILWAY ISSUES

Some of the most important railway issues of the past few years are addressed in this section. Differences in points of view among the players are noted.

Rationalization and Mergers

Railways in Canada have been rationalizing their operations over the past few years by reducing their networks, either through outright abandonment or through conveyances. At various times, CN and CP have discussed the possibility of operating jointly in the Saint John and Ottawa river valleys and merging their eastern Canadian networks. CP also offered to buy CN's eastern rail lines. The railways discussed these initiatives in their

search for ways to improve their long term financial position by reducing costs. Because the economy has changed, the railways claim that not enough high-volume traffic remains for both of them to continue being viable in eastern Canada.

While shippers accept the need for railways to be financially healthy, they are generally opposed to the railways' merger and buyout proposals. Shippers fear loss of service and higher prices would probably result from rail monopolies in certain regions.

These views are held by shippers in a number of organizations, such as the Canadian Industrial Transportation League, the Western Canadian Shippers' Coalition, the Northern Ontario Transportation Coalition and the Canadian Pulp and Paper Association. The Federal Task Force on Commercialization of CN heard similar views, and a report commissioned by the Ontario government warned that rail abandonment in northern Ontario would cost the province's economy \$1 billion and throw 10,000 people out of work.

A possible solution to the problem of the major railways' need to

rationalize their networks and the shippers' need for continued transportation service by rail could be more use of conveyances to short-line operators. A new national rail policy to deal with this and other problems is expected in 1995.

Competition versus Cooperation

Maintaining and improving the economic efficiency of Canada's railways is a primary objective of government policy. A perennial question is whether this is better achieved through competition or through co-operation. The framework policy in place since the 1980s definitely favors competition, and this stance is reflected in the *NTA, 1987*.

Shippers have been demanding improved service from railways. This includes improved transfers of goods between carriers, which is part of what is known as "seamless service". Railways have responded by forming closer alliances with other railways and firms in other modes. These alliances are often called "strategic alliances".

Railways in Canada have been facing stronger financial pressures since competition increased. These have caused them to carry out co-production agreements and consider partial mergers. U.S. railways too have been discussing large-scale mergers. In 1994, activity in this area was much greater than at any other time in the past decade.

How can such matters as seamless service, strategic alliances, co-pro-

duction agreements and mergers co-exist with competition?

Railway merger activity was very topical in 1994, renewing old questions of operational versus market efficiency.

Railways themselves are asking this question. In commenting on the Conrail/Norfolk Southern merger proposal, Gerald Davies, CN's senior vice-president of marketing, noting that CN is a partner and a competitor of both companies, observed that "you have to figure out which one is more important".

Shippers have divided opinions on the matter. Some support railway mergers to avoid delays when switching from one railway to another. Others fear shippers will lose their ability to negotiate with competing railways for better rates and service.

The National Industrial Transportation League in the U.S. wants their government to take action to preserve competition in the face of the spate of proposed rail mergers, and appears quite interested in the competitive access provisions found in Canadian legislation.

The Director of Investigation and Research of Canada's Bureau of Competition Policy, in his submission to the National Transportation Act Review Commission, said "It is not the intent of Canada's competition legislation to prevent legitimate efficiency efforts when

they do not result in a substantial lessening of competition."

One final note illustrates the longevity of this problem. A.G. Blair, who was Canada's Minister of Railways and Canals under Sir Wilfrid Laurier, resigned in protest against the government's support of competing and parallel transcontinental railway construction at the expense of using transportation infrastructure efficiently.

Transport Renewal in Canada

Within Transport Canada (TC), 34 commercialization and transition initiatives are underway. While many will have little or no impact on the railways, some will have substantial effects.

Most significant is the comprehensive rail renewal plan that the Department hopes to unveil in the spring of 1995 in its national rail policy. Throughout the fall of 1994, TC held a series of rail renewal workshops across the country to gather comments and suggestions from major stakeholders on how to solve the railways' costs, capacity, regulatory, management and labour difficulties.

Closely allied to the above is the Parliamentary task force that was charged in September 1994 with studying the commercialization of CN. The task force held hearings in various Canadian cities and reported in early 1995. Its main recommendation was "that the Minister of Transport commit to a process leading to the full commercialization of the Canadian National Railways as a coast-to-coast main-line opera-

tion". The Minister has supported this recommendation publicly.

It appears the government no longer wants to be the owner of CN. Having rejected CP's offer to purchase, it may look for another option for commercialization. Regardless of how the government proceeds, an impact on rail rates, service and competition is certain.

Commercialization of government transport entities, including CN, is on the agenda for the next few years.

Of the other TC commercialization initiatives, the one involving the Seaway has the greatest potential impact on the railways. Obviously, any great change in the price competitiveness of the Seaway could have a very large impact on the traffic levels enjoyed by the railways of eastern Canada.

Such drastic changes are also under way in other countries. In the U.S., the new Congress, under a Republican majority, is slated to embark on a major restructuring of federal involvement in transportation regulation, subsidies and operations. In Britain, the government has decided to privatize separately the infrastructure and operations of British Rail. One company will own the rail roadway (to be called Railtrack, and due to be privatized in April 1996) on which will operate a number of companies providing train services.

Tax Levels

Canadian railways for many years have claimed that the tax system in Canada discriminates against them. They are concerned about their tax levels compared to both that of their U.S. railway competitors and that of trucking companies. An issue of particular concern to the railways is that they have to pay the full cost of their infrastructure while trucking companies, they claim, do not pay their full share of the cost of the highways they use.

Different groups have made numerous studies into these issues, which continue to be hotly debated.

The federal Transport Minister has promised to address the taxation issue in the proposed new national rail policy, expected to go before Cabinet in 1995.

Rail Environmental Issues

Environmental matters that affect railway transport have played a role in a number of areas in the past year. These can be summarized under legislative/regulatory changes, rail line abandonment, emissions and fuel consumption, and special studies.

Legislative and Regulatory Changes

The most significant change is the *Canadian Environmental Assessment Act (CEAA)*, proclaimed in January 1995. The CEAA was created to eliminate confusion caused by uncertainties under the old *Environmental Assessment Review Process Guidelines*. The new legislation will affect the environmental assessment by the Agency of certain proposed railway

actions. In particular, future branch line abandonment applications will be subject to environmental screening.

June 1994 saw the report of the Producer Payment Panel for the *Western Grain Transportation Act* payments. Among its conclusions are that a change in the method of payment would have a positive effect on land cover and soil improvement and reduce wind and water erosion. This is because the acreage under grains and oilseeds in western Canada would be reduced. Furthermore, any shift from rail to truck as a result of a change in method of payment would lead to negligible change in fuel consumption and emissions.

On December 6, the government, tabled the proposed *Regulatory Efficiency Act* to encourage innovative ways to meet regulatory obligations. The proposed legislation stresses that health, safety and environmental protection must be maintained or improved.

Rail Line Abandonment

As stated above, the *Canadian Environmental Assessment Act* requires assessments of all abandonments proposed after January 1995. The Act would have required an environmental assessment of the controversial abandonment of the CP line through the Ottawa Valley, which may bring more train traffic through Algonquin Park.

At an international conference on sustainable tourism, held in Montreal in September 1994, a group called Rails to Greenways advocated converting abandoned rail lines to

Rails to Trails movement making slow progress in face of environmental and landowner concerns.

recreational, heritage or nature trails. While the notion is attractive, it needs to address the question of responsibility for any environmental liability attached to the land in question. In Alberta, the *Environmental Enhancement and Protection Act* requires railway companies to obtain a Reclamation Certificate before selling an abandoned right-of-way. Another problem is that many farmers and other landowners adjacent to the rights-of-way do not want the land opened to the public for recreational purposes, fearing interference with farming operations and liability for accidents. The proclamation of *Prince Edward Island's Trails Act* has been held up because of strong opposition from farmers. In November, the Ontario government announced it was earmarking \$2 million in capital funding over the next two years to acquire, develop and protect abandoned railway rights-of-way.

Emissions and Fuel Consumption

The replacement of truck by rail intermodal for many linehaul movements results in lower emissions of nitrous oxides, hydrocarbons, carbon monoxide and carbon dioxide. Of the four main modes of transport, studies show that, on an average tonne-kilometre basis, rail transport releases the lowest emissions; trucks and air the most. This shift to intermodal also lowers fuel consumption, because

rail, on an average tonne-kilometre basis, consumes only about 10 to 23 per cent of the energy used by truck transport, depending on class of vehicle.

Special Studies

Two reports released in late October could have an impact on rail transport. One report, *Competitiveness through Energy*, was prepared by the Committee on Energy Efficiency of the National Advisory Board on Science and Technology, which is chaired by the Prime Minister. Among its recommendations the report stated "that Transport Canada, with the support of the National Transportation Agency, Natural Resources Canada, Industry Canada, the National Research Council, and representatives from private industry and labour, establish a working group to study further international best practices and an effective system of measurement for energy efficiency not just in rail, but in land, air and sea transportation".

The other report, *Options for Canada's National Action Program on Climate Change*, was prepared by the Climate Change Task Group of the National Air Issues Coordinating Committee. It recommends developing a National Green Transportation Strategy, developing high speed rail for passengers, removing subsidies and special taxes on road and rail, putting in place full-cost road user charges and lowering highway speeds to 80 kilometres per hour.

Rail Car Supply

The very large traffic increase in 1994, although welcome to the railways, came after several years of reduced traffic and plant downsizing

by the railways to lower costs. One unfortunate result of this was that, at times, there was less motive power and carrying capacity than the railways needed to satisfy customers. The grain business was particularly vulnerable to car shortages early last year.

The supply of railway cars for hauling grain rose to meet the high demands of 1994.

During the winter of 1994, a 12 day strike at the port of Vancouver exacerbated an already tight supply of rail cars for grain exports. At that time, CN and CP had approximately 25,000 covered hopper cars in their fleet to carry grain. Although rail cars are often leased from the U.S., availability is not always assured. In 1993, shortage of rail cars was a serious problem for the U.S. grain industry because of summer flooding in the Midwest and a late harvest. This reduced the grain carrying capacity available for lease to Canadian railways.

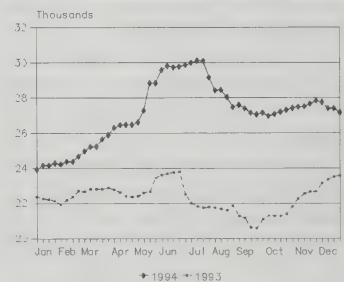
In March 1994, the Grain Transportation Agency (GTA) reduced the number of rail cars it allocated to U.S. destinations in an effort to improve car turnaround times to Canadian ports. The GTA is responsible for coordinating the flow of western grain to ports. Old boxcars that had not been in service since 1990, along with open-top, refurbished coal cars were put into service to move grain during this period of car shortage. CP managed to lease 1,000 covered hoppers from a variety of U.S. companies for grain service in Canada and also, in May, shifted hopper cars in its existing

fleet from fertilizer to wheat transportation.

Also in May, Members of Parliament began public hearings into Canada's grain car shortage. The meetings brought together representatives from CN, CP and major grain distributors. The Minister of Agriculture also met grain industry officials to address grain transportation inefficiencies. From these meetings it was learned grain shipments were delayed mainly for these reasons: the shortage of rail cars, the labour/management dispute at west coast export terminals, the lack of weekend unloading of grain at the west coast and the effects of the extremely cold winter on rail operations.

In the early part of the 1994-95 crop year, which started on August 1, the grain transport system set new shipping records. Shippers and administrators cite as reasons the significant increase in rail car supply by then (Figure 5.18), an early fall harvest, the high quality crops, relatively fewer cars moving to the U.S. and the better cooperation among industry participants.

Figure 5.18
Weekly Hopper Car Fleet - CN and CP
(Includes Government Hoppers)



Source: Grain Transportation Agency

By late summer, in spite of the vast improvement in the transportation and handling of grain compared to the same period in 1993, concerns were rising about a possible shortage of grain rail cars to move the record volume of specialty crops and canola. After several months of consultations, the GTA announced in September that, as a short-term measure, cars destined to Vancouver would be rationed on the basis of historic share. In Thunder Bay, grain cars would be allocated on the basis of sales, with greater accounting of vessel loading requirements.

CP announced in late spring that it would invest over US\$45 million to add 900 new covered hopper cars to its fleet. Production by National Steel Car in Hamilton began in August. CN put out a \$75 million tender for 1,000 new or used covered hopper cars for a seven year lease. The railway chose the leasing option because of uncertainty about proposed changes to the WGTA, and by year end had decided to defer this investment.

At the end of 1994, the federal government was considering changing the current grain car allocation system, selling the government's hopper car fleet and allowing financial bidding by shippers for the use of cars. These ideas were contained in the WGTA "Efficiency Reform Proposals".

To make the current grain transportation system more efficient, Bill C-66 amending the WGTA to allow for demurrage and car storage charges, was tabled in December. In the past, there have been problems caused by rail cars being used for grain storage and sitting idle during

periods of car shortage. The new charges are expected to be in place for the 1995-96 crop year, which starts on August 1.

Women in Non-traditional Rail Occupations

The department of Human Resources Development Canada defines a "non-traditional" occupation for women as an occupation where the female representation in the workforce is less than or equal to one-third of the total workforce. Most occupations in Canada's railways have always been "non-traditional" for women and during the past two decades the railways have taken various measures to correct this situation.

The proportion of women in the railways' labour force continues to increase.

By holding counselling sessions for newly hired female employees, the railways hope for better success at retaining women employees. Published guides help employees eliminate sexist language from written, visual and oral communication. The railways have also changed the workplace environment and provided appropriate facilities to accommodate newly hired female employees. Women now occupy such positions as train service employee, train dispatcher, yard supervisor, yard helper, laborer and machinist. Equity initiatives such as educational leave have successfully helped women to move into the management ranks.

These measures are starting to pay off. The representation of women at CN has doubled from four per cent in the mid-1970s to eight per cent in 1994. Currently, 14 per cent of all management positions are held by women, up seven per cent from 1986. Three women also hold executive positions within CN.

In a period of downsizing, the railways are continuing their efforts to achieve employment equity in their workforces. For example, in 1993, the total number of women employees at CP decreased by only one per cent, a marked contrast to a decrease of seven per cent in the number of males employed.

However, as downsizing continues, opportunities to improve employment equity in the railways will also diminish.

Rail Labour Issues

There was much activity on the railway labour front in 1994. Collective agreements with the three Class I railways—CN, CP and VIA—expired at the end of 1993. Prolonged and difficult negotiations followed. Railway management seemed determined that this is the time to make significant changes to control labour costs and to accelerate the improvement in labour productivity. The unions seemed determined to hold on to employment security benefits gained in past negotiations, especially now that the railways are going through drastic labour force downsizing. In 1993, labour costs accounted for 43 per cent of total operating expenses for CN and CP combined.

Canada was hit by a nine-day general rail strike in March 1995.

In the fall of 1994, the unions representing CN's workers in the negotiations received a mandate to call a strike if the contract talks fail. Similar strike votes were held in January, 1995 for CP and VIA workers, and the unions received massive support for strike action. A major national concern is the impact a strike would have on Canada's booming export drive. In reaction to this concern, the government was actively trying to facilitate the negotiations. As early as April 1994, the Human Resources Development Minister appointed Vancouver lawyer Paul Fraser to review the railway labour issues under negotiation and report back with recommendations by the end of June. In November, when it was clear that talks under conciliator Tom Hodges were going nowhere, the government appointed Allan Hope, another Vancouver lawyer, as mediator.

After meeting both sides he reported back to the Human Resources Development Minister in early February of 1995. Seven days after his report was released in late February, the unions were in position to strike. As of March 13, 1995, only CP Rail had been targeted for strike action. Several work stoppages involving a few hundred workers for a few hours had occurred, and management had reacted by locking out the implicated employees. By March 18, the strike had spread to CN and VIA Rail, shutting them down completely. CP, however, maintained reduced operations with management

employees. On March 26, the government passed back-to-work legislation and rail service resumed the next day.

Under the legislation, the government established 17 mediation-arbitration commissions, of which seven are at CN, four at CP and six at VIA Rail. The commissions have 70 days to attempt to mediate the dispute between the parties and, if no agreement is reached, arbitrate any issues remaining in dispute to conclude new collective agreements. These agreements will be required to reflect the need for a viable and competitive railway industry in Canada.

One issue of great concern to railway unions is how proposed railway mergers will affect their members' jobs. The unions themselves are merging into bigger blocks to strengthen their bargaining clout. In June, some 6,500 shopcraft workers at CN voted to join the Canadian Autoworkers Union (CAW), following a similar vote among 5,300 shopcraft workers at CP and VIA in April. They followed 7,000 railway workers from the Canadian Brotherhood of Railway, Transport and General Workers (CBRT), who also voted to join the CAW in April. Altogether, some 32,000 CBRT members have joined the CAW, making the latter the largest private sector union in Canada, with about 202,000 members.

High Speed Rail

This was a year of mixed blessings for advocates of high speed passenger-train service. The long-

awaited federal-provincial study on the feasibility of high speed rail in the Quebec-Windsor corridor was still not completed by the end of the year. The need to resolve some thorny issues about estimated demand delayed progress. However, the final report was expected to be submitted to the federal and provincial Deputy Ministers in April 1995.

While Canada continues studies, Amtrak in the U.S. has invited bids to build 26 high speed trains to serve the Boston-Washington corridor.

Meanwhile, there has been some movement to increase passenger-train speeds on the existing network. VIA Rail spent \$7.5 million on track improvements to reduce the time for Toronto-Windsor trips by ten per cent, increasing maximum speed from 128 to 153 kilometres per hour. South of the border, Amtrak has invited bids from three consortia, one of which includes Canada's Bombardier, for a US\$600 million contract to build 26 high speed trains. These trains would go in service in the Boston-Washington corridor. Expected to be fully operational by 1999, their top speed will be 241 kilometres per hour.

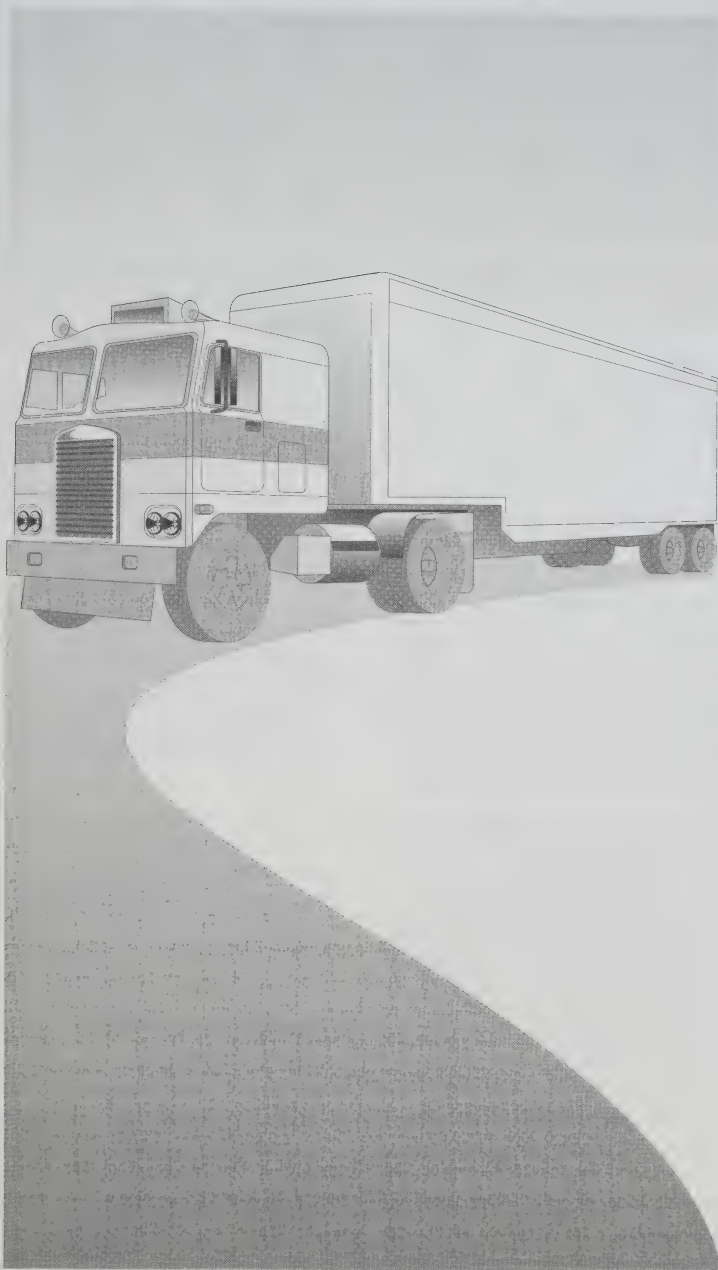
This was almost the only good news for high speed rail in the U.S. The project between Houston and Dallas was the most advanced, but in August, the State of Texas cancelled the concession given to the consortium to build it. The perennial

problem of financing such large projects was at the root of this action. In Florida, however, the Miami-Orlando-Tampa project, which appeared moribund in 1993, may now be in line for some state funding to keep it alive until private financing comes forth.

It remains to be seen what role such large capital projects as high speed rail will play in North America. Continuing financial difficulties make it unlikely that either the Canadian or U.S. governments will invest money into high speed rail without a significant contribution from the private sector. VIA Rail and Amtrak, reacting to pressure to diminish their dependence on government subsidies, have already cut jobs and reduced their networks, making it doubtful that they will be major players in any high speed rail scenario.

Airlines are unlikely to give a warm reception to high speed passenger rail. Many years of intense competition among themselves indicate that they are not about to lose market share to another mode without a fierce fight.

TRUCKING SERVICES



Highlights of 1994

Recovery for Truckers

Beginning in 1993, the steady improvement of the economy led to increased traffic volumes and fleet replacement programs.

Trucking Performance

Fewer bankruptcies, improved operating ratios and healthier financial performance were experienced industry-wide.

Competition

Intense trucking competition continued in the pricing, product and service areas.

Services and Operations

Trucking firms continued to develop new products and services to fill specific shipper needs. The industry also responded in various ways to the continued driver shortage in certain market segments.

Regulatory Environment

Domestic and international regulatory harmonization continued.

MOTOR CARRIER POLICY AND REGULATORY ENVIRONMENT

The Canadian motor carrier industry, like other transportation modes, is affected by various federal and provincial government policies and regulations affecting the economy; vehicle size and weight; pension and employee benefits; health and safety; and environmental protection. Although the Canadian Constitution gives the federal government the authority to regulate extra-provincial trucking, since 1954 the federal government has delegated control of extra-provincial trucking to the provinces.

Federal Ownership of Trucking and Equipment Infrastructure

Jacques Cartier, Champlain, Thousand Islands, and Valleyfield Bridges

Melocheville Tunnel

The current regulatory framework for extra-provincial trucking is contained in the *Motor Vehicle Transport Act, 1987 (MVTA, 1987)*. The *MVTA, 1987* regulates extra-provincial undertakings, i.e., trucking firms operating beyond the limits of one province or territory (between provinces or across the Canada-U.S. border). Since the reverse-onus public interest entry test was eliminated on January 1, 1993, fitness has become the sole standard for licensing extra-provincial trucking. During 1994, both domestic and international regulatory developments held implications for the Canadian motor carrier industry.

Federal Legislation Governing the Trucking Industry

- *Atlantic Region Freight Assistance Act*
- *Department of Transport Act*
- *Motor Vehicle Fuel Consumption Standards Act*
- *Motor Vehicle Safety Act*
- *Motor Vehicle Tire Safety Act*
- *Motor Vehicle Transport Act, 1987*
- *Safe Containers Convention Act*
- *Transport Act*
- *Transportation of Dangerous Goods Act*
- *National Transportation Act, 1987*

Federal Trucking Budgets/Expenditures* (\$000)

TRANSPORT CANADA	
Road Safety & Motor Vehicle Regulation	16,875
Emergency Planning & Operations**	390
Transport of Dangerous Goods**	10,241
Direction & Administration**	1,473
Total	28,979
NATIONAL TRANSPORTATION AGENCY	1,988
Total	30,967

* Excluding subsidies

** Truck and rail

Source: 1994-95 Main Estimates

Revenues/Recoveries on Federal Services to the Trucking Industry

Estimated revenues/recoveries on services related to road safety and motor vehicle regulation are \$310,000.

Source: 1994-95 Main Estimates

Merger and Acquisition Cases before the Agency

During 1994, 16 trucking cases were brought before the Agency under the reviewable merger and acquisition provisions of the *National Transportation Act, 1987 (NTA,*

Federal Trucking Subsidies (\$000)

Strategic Capital Investment Initiatives	129,000
Atlantic Region Freight Assistance Payments	84,310
Highway Improvements	63,388
Jacques Cartier & Champlain Bridges	36,981
St. Lawrence Seaway Authority - Valleyfield Bridge	2,000
Canadian Trucking Research Institute	650
Road Safety & Motor Vehicle Regulation	48
Total	316,377

Source: 1994-95 Main Estimates

1987) (Part VII). In ten of the 16 cases, the Agency ruled that the proposed acquirer did not have to notify the Agency. The Agency received the remaining six cases and issued decisions.

Domestic Regulatory Developments

Both the federal and provincial governments entered into the Agreement on Internal Trade to dismantle inter-provincial trade barriers. The agreement, which comes into force in July 1995, will stimulate new traffic flows for the

trucking industry because of lower tariff barriers, and effective 1998, the agreement will help with the deregulation of intra-provincial undertakings of extra-provincial carriers.

***Domestic regulatory
harmonization for
motor carriers
progressed during
1994.***

The question of transportation subsidies was a major issue during the year. As part of a review on all aspects of the federal government's expenditures on Canada's transportation system, the Minister of Transport initiated reviews of various transportation subsidy programs. A policy review of the *Atlantic Region Freight Assistance Act* and the *Maritime Freight Rates Act* (ARFAA/MFRA) began during 1994.

In the Atlantic Region, the position of the Atlantic Provinces Trucking Association (APTA) was that the ARFAA and MFRA programs were cornerstones of economic development and that APTA would support any refinements to the programs as long as the government consults with shippers and truckers in Atlantic Canada.

APTA's concern stems from the fact that approximately 80 per cent of the subsidy payments made by the Agency in 1994 were to truckers. Almost all of the other 20 per cent went for rail-moved goods. Appendix C.3 provides additional details of the ARFAA/MFRA expenditures for calendar 1994.

On February 27, 1995, the Minister of Finance announced in the budget speech that the ARFAA and MFRA subsidies will be eliminated July 1, 1995. A \$326 million transportation adjustment program will be paid over five years for regions currently receiving ARFAA/MFRA subsidies. In addition, transition programs will permit provinces to target assistance to local shippers' adjustment needs and to provide improved infrastructure.

On October 1, 1994, the Atlantic Fuel Tax Agreement (AFTA) became effective in the provinces of Nova Scotia, New Brunswick and Prince Edward Island. AFTA simplifies the registration, reporting and record-keeping process for truckers that travel in two or more of the participating provinces.

In Western Canada, the *Western Grain Transportation Act* (WGTA) was being reviewed both to find ways to reduce government expenditures and to help Canada comply with the new General Agreement on Tariffs and Trade.

As part of the budget, the Minister of Finance also announced that the \$560 million subsidy to the railways under the WGTA will be eliminated as of August 1, 1995. At the same time, the provisions of the *NTA, 1987* will apply to the transportation of Prairie grain. There will be a transition to market-determined freight rates. Measures will be introduced to facilitate removal of uneconomic branch lines and to change pooling points for Canadian Wheat Board export shipments. The trucking industry in Western Canada welcomed the repeal of the WGTA subsidy to the railways, since it

would open the way for trucking companies to move grains previously dedicated to rail.

International Regulatory Developments

Work on harmonizing trucking regulations and administrative practices within the context of the North American Free Trade Agreement (NAFTA) continued during 1994. In April 1994, the federal Minister of Transport met with his U.S. and Mexican counterparts to hold a North American Transportation summit. Throughout the year, implementing the NAFTA transportation provisions involved detailed work handled by two NAFTA mechanisms - the Land Transport Standards Subcommittee and the Canada/USA/Mexico Transportation Consultative Group.

As part of these two NAFTA bodies, various working and consultative groups are working towards a uniform regulatory framework that will cover driver and vehicle standards and compliance; vehicle weights and dimensions; traffic control devices; hazardous materials; cross border operations; border crossing facilitation; and commercial driver information. Work continued throughout the year towards the goal of complete regulatory harmonization by the year 2000.

A Memorandum of Understanding (MOU) was signed in April 1994 by the Minister of Transport and the U.S. Transportation Secretary to improve facility-audit procedures between the two countries. The MOU provides for mutual

recognition of each other's audit findings.

The NAFTA and evolving regulatory environments in the U.S. and Mexico are presenting new market opportunities for Canadian motor carriers.

During 1994, Saskatchewan and Manitoba joined the International Fuel Tax Agreement (IFTA). Alberta joined the IFTA in 1993, and the remaining Canadian jurisdictions have yet to announce if and when they will become members at IFTA. IFTA is a program designed to simplify the collection of fuel tax for transborder motor carrier operators and make collection more uniform from jurisdiction to jurisdiction. Under this system, a carrier chooses one member jurisdiction as a base. The carrier will deal only with the base jurisdiction for fuel tax licensing, payment and reporting. The base jurisdiction will then deal with all other jurisdictions on the operator's behalf.

In March 1994, Canada and Mexico signed a MOU, which allows Canadian trucking companies to haul their own trailers into a free trade zone extending 20 kilometres into Mexico instead of dropping them on the American side of the border to be hauled across by Mexican tractors. In October 1994, Challenger Motor Freight became the first Canadian carrier to cross the Mexican border under this new MOU.

The Canadian trucking industry was also actively involved in NAFTA during 1994. In April 1994, the Canadian Trucking Association (CTA), the American Trucking Association (ATA) and the Trucking Association of Mexico (CANACAR) announced the formation of the North American Transportation Alliance to pursue common research and policy goals continent-wide. The first research project by the alliance will be a study called the North American Trucking Profile. The CTA also sought and obtained ATA support to work together to have identical cabotage rules in Canada and the United States. The CTA position is based on: a) full trailer and equipment liberalization between the two countries, so that trailers or any containers or chassis could be used for both international and domestic traffic in both countries; and, b) by allowing one tractor-driver repositioning movement, which would mean that a Canadian trucking firm can enter the U.S. with an international load, and make a U.S. domestic move to reposition the equipment for another back-haul load to Canada.

In August 1994, the U.S. government passed the *Trucking Industry Reform Act*, which resulted in intra-state deregulation of trucking effective January 1995. Before this legislation was passed, only nine states had deregulated their intra-state trucking operations. Individual states will still regulate insurance and safety, but without regulating economics (except for household goods). This legislation also removed the shipper's legal responsibility to pay filed rates and the carrier's responsibility to file

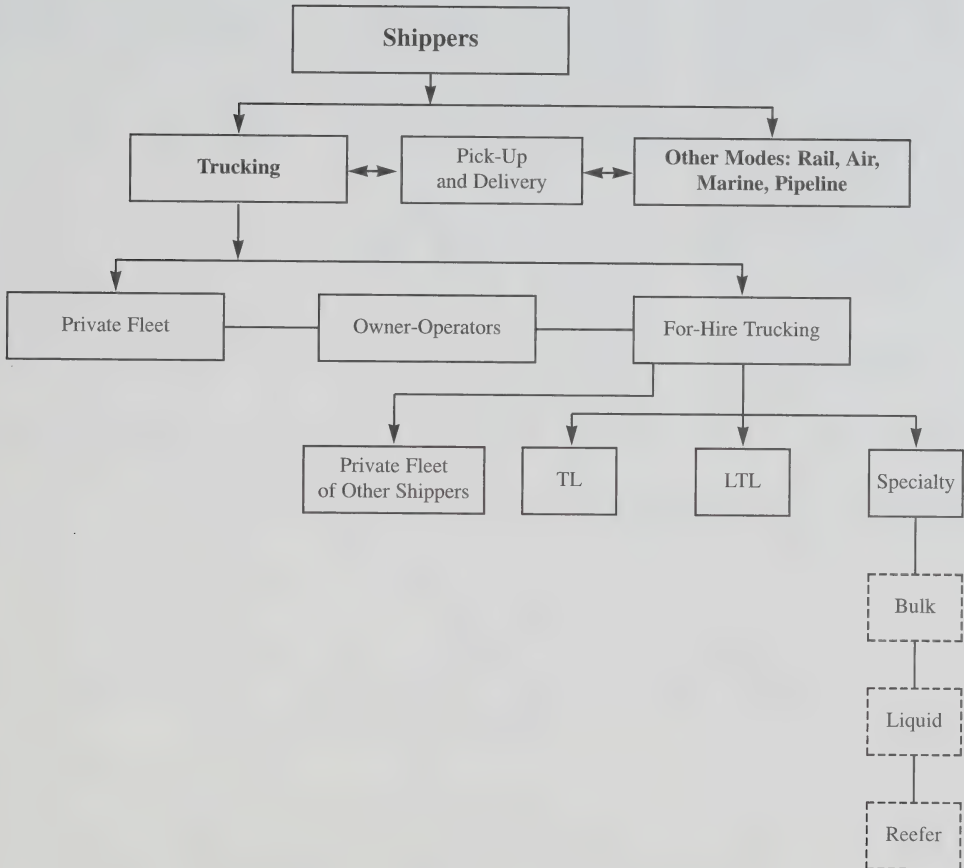
rates, thus making for a purely competitive environment. Several Canadian carriers consulted by the Agency indicated that this development was an opportunity to expand their U.S. operations and enter new markets south of the Canadian border.

CANADIAN TRUCKING INDUSTRY STRUCTURE

Canadian trucking firms offer a broad range of services. These different types of services, to some extent, also represent different segments of the industry. In general, the trucking industry in Canada is divided into two major segments: for-hire trucking and private trucking. For-hire trucking includes carriers principally engaged in the transportation of freight for compensation on a truckload and less-than-truckload basis. The truckload segment, known as TL, consists of carriers that primarily pick up an entire truckload of cargo and move it to single final destination, typically on an irregular schedule. For example, moving an entire trailer full of products from a manufacturing plant to a distribution centre or a large customer's distribution/retail site. In terms of customer base, TL carriers usually deal with a small number of shippers, often with special needs e.g. liquid bulk, auto carriage, refrigerated tankers etc.

The less-than-truckload industry, known as LTL, consists of carriers that primarily pick up less than a truckload of merchandise from one

Figure 6.1
Shippers' Transportation Needs and Trucking Services



customer and consolidate that freight with another customer's freight into one full trailer, then move the cargo to the destination city. At the destination city, the cargo is resorted and delivered to the receivers, on regularly scheduled or even ad-hoc runs. The LTL customer base is extremely broad and highly diverse.

Private trucking is defined as the operation of a fleet by a company not principally involved in trucking. Private fleets owned by Canadian shippers are a principal competitive alternative to common carrier trucking companies.

Figure 6.1 depicts the major players in the Canadian trucking industry. A shipper's choice between using

for-hire services or operating its own private fleet of trucks depends mainly on the cost of the entire logistics and distribution function and its own market considerations. A shipper can also use another mode of transportation. Depending on the type of traffic, rail, air, marine or pipeline can be alternatives to trucking. If shippers choose another mode, they will need trucking to begin and/or complete a portion of the rail, air or marine transportation.

The number of carriers operating in the TL market is larger than those operating in the LTL market primarily because of the relatively lower barriers to entry for TL carriers. A much higher level of investment is required in LTL as it

requires terminal facilities to consolidate or split cargoes. For this reason, many LTL carriers operate hub and spoke networks to build efficient intercity loads.

Owner-operators are independent drivers who own or lease their vehicles and haul trailers or other equipment for a carrier. Owner-operators can work for private carriers, for-hire carriers (or both), and for more than one carrier.

Trucking operations involve other segments such as package express and contract carriers. Freight forwarders and third-party logistics companies play a small role in domestic shipment; their presence is more significant in the international

Table 6.1

Applications for Extra-Provincial Licence Authorities by Jurisdiction and Domicile of Applicants: 1993-1994

	Domicile of Applicants							
	Residents		Other Canadian Jurisdictions		U.S.		Total	
	1993	1994	1993	1994	1993	1994	1993	1994
Nfld.	8	n/a	48	n/a	6	n/a	62	n/a
P.E.I.	12	14	64	46	8	5	84	65
N.S.	119	57	145	145	29	19	293	221
N.B.	33	21	192	194	60	27	285	242
Quebec	704	989	353	488	432	744	1,489	2,221
Ontario	568	909	469	707	481	339	1,518	1,955
Manitoba	64	65	239	193	111	108	414	366
Sask.	105	142	191	206	67	96	363	444
Alberta	208	272	219	311	85	117	512	700
B.C.	150	283	231	255	127	136	508	674
Yukon	21	4	27	27	4	7	52	38
CANADA ¹	1,992	2,756	2,178	2,572	1,410	1,598	5,580	6,926

¹ Excludes the N.W.T.

Source: Provincial Licensing Boards, Agency Records

market. These firms arrange transportation and provide distribution services on behalf of the shippers.

Since deregulation, the distinction between different types of trucking services has largely disappeared. With the liberalized and unconstrained licensing process, trucking firms have been able to diversify their operations to increase productivity and offer more service. For example, major trucking companies such as Reimer, Interlink (Formerly CP Trucks), Challenger, Mullen and Kleysen, among others, have added different product lines and segments. These new areas include segments such as warehousing, logistics, auditing, expedited courier, distribution and other value-added services. Time sensitive services such as small package and parcel carriage are growing faster than basic commodity shipping. The various segments in which trucking companies operate each have different competitors, different customers, different equipment needs and sometimes, different labour requirements.

Market Entry

Since 1989, the Agency has used the number of applications for extra-provincial licences provided by each province as an indicator of market entry activity.

Based on the number of applications in reporting provinces, market entry activity increased during 1994 by 24 per cent as shown by Table 6.1. Forty per cent of the applications were submitted by carriers based in the jurisdiction where the application was filed and 37 per cent of

applications were filed by carriers based in other Canadian jurisdictions. Twenty-three per cent were filed by U.S. carriers.

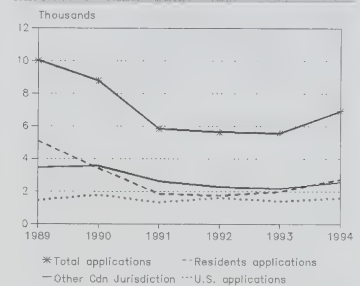
The largest increases in the number of total applications were noted in Quebec, Alberta and British Columbia, 49 per cent, 37 per cent and 33 per cent respectively. In Quebec, this rise was due mostly to more U.S. applications. The number of extra-provincial licences held by U.S. carriers provided by the province of Quebec also includes the number of trip permits. According to Quebec officials, the increase in U.S. applications was mainly due to an increase in trip permits. In Alberta, the increase was mainly associated with a rise in applications from both residents and non-residents in other Canadian jurisdictions. In British Columbia, a rise in applications by residents of British Columbia was the main reason for the 33 per cent increase in total applications.

Decreases ranging from 12 to 27 per cent in the number of total applications were noted in Nova Scotia, New Brunswick, P.E.I., Manitoba and Yukon.

An historical overview of the number of applications since 1989, as seen in Figure 6.2, shows a downward trend up to 1993. In some provinces, it is necessary to renew operating authority after a certain time, while in other provinces it is no longer necessary to apply for renewal. The Agency's Motor Carrier Interview Program is also showing the same trend. Eight per cent of the carriers interviewed indicated that they applied for extra-provincial licences (domestic and

transborder) in 1994 compared to 80 per cent in 1988. Carriers indicated that the reasons for applying for other licences were either to renew licences or to obtain a licence for eventual expansion in another jurisdiction. Carriers were also asked if they ceased doing business in a particular jurisdiction. This included extra-provincial domestic/ transborder licences which were not renewed in 1994. In total, six carriers said they had stopped operating in a particular jurisdiction.

Figure 6.2
Total Number of MVTA, 1987
Applications 1989 - 1994



Source: Agency Records, Provincial Licensing Boards

Market Entry by U.S. Carriers

The total number of applications for extra-provincial operating authorities by U.S. carriers increased in 1994. Quebec reported that the number of these applications went up by 72 per cent. As explained above, the main force driving the increase is the high number of trip permits issued. B.C. reported an increase of seven per cent. Applications by U.S. carriers in Ontario went down by 30 per cent.

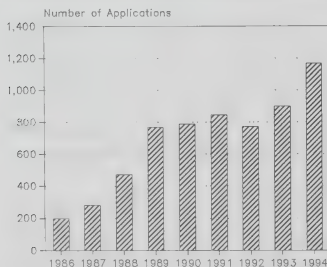
With NAFTA opening the way for more trade between Canada, the United States and Mexico, U.S. carriers have been positioning themselves to carry this trade. As

shown by Table 6.2, U.S. carriers held 7,859 operating authorities at the end of 1994. This represents an increase of ten per cent over 1993. It should be noted that this number might overstate the actual number of U.S. carriers operating into Canada since the same carrier may hold an operating authority from several jurisdictions due to the nature of its transborder operations. All provinces reported an increase in the number of operating authorities held by U.S. carriers. Saskatchewan reported the highest increase with 47 per cent.

ICC Applications by Canadian Carriers

In 1994, Canadian carriers made 1,167 applications to the ICC to provide international service between Canada and the U. S. This represents an increase of 30 per cent over last year (Figure 6.3). More Canadian companies are finding opportunities in the growing flow of north-south traffic and from a lower Canadian dollar relative to the U.S. dollar.

Figure 6.3
ICC Applications by Canadian Carriers
1986 - 1994



Source: Interstate Commerce Commission

Table 6.2
Operating Authorities in Canada Held by U.S. Carriers

	1991	1992	1993	1994
Nfld.	27	33	38	n/a
P.E.I.	35	40	45	45
N.S.	111	134	144	173
N.B.	196	229	277	283
Quebec	877	1,126	1,269	1,349
Ontario	2,066	2,506	2,799	3,113
Manitoba	457	533	645	702
Sask.	341	404	400	587
Alberta	559	624	728	762
B.C.	632	734	775	820
Yukon	22	14	22	25
Total ¹	5,323	6,377	7,142	7,859

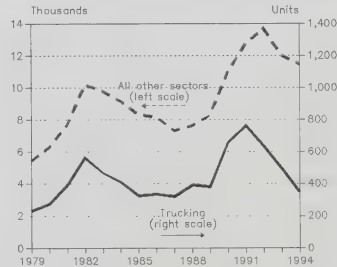
¹ Excludes N.W.T.

Source: Provincial Licensing Boards, National Transportation Agency

Market Exit

During 1994, the number of trucking bankruptcies declined. In 1994, there were 350 bankruptcies compared with 499 during 1993 (Figure 6.4). The main reason for the lower number is a healthier Canadian economy which has produced growing traffic volumes

Figure 6.4
Bankruptcies Reported in Canada

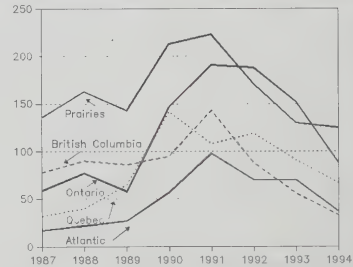


Source: Office of the Superintendent of Bankruptcy

and higher revenues for the industry. Figure 6.5 shows the number of trucking bankruptcies by region.

In the economy as a whole, the industries which suffered the most bankruptcies were the following: retail (24 per cent), construction (15 per cent), accommodation, food and beverage service industries (nine

Figure 6.5
Trucking Bankruptcies by Region
1987 - 1994



Source: Office of the Superintendent of Bankruptcy

per cent), manufacturing (eight per cent), the wholesale trade industries (six per cent), the business services industries (six per cent) and finally, the transportation and storage industries (four per cent).

Mergers and Acquisitions

Mergers and acquisitions continued in 1994 as some trucking companies looked to get out of non-performing market segments, while others bought companies to encourage growth and help them gain entry into expanding markets.

In general, trucking companies seek merger and acquisition opportunities when they result in one or more of the following:

- improved balance sheets;
- improved operating margins;
- potential operating synergies; and
- increased geographic coverage.

Table 6.3 shows the number of Canadian trucking firms interviewed by the Agency which acquired an interest in or control of another Canadian trucking firm.

from Canadian Pacific Ltd. by a group of senior managers, supervisors and employees of the company.

Westminster Holdings, Toronto, continued its expansion with the acquisition of Highland Transport of Toronto, Canada's largest general freight truckload carrier. In 1993, Westminster also acquired CP Trucks' parcel delivery service, CANPAR.

Mullen Trucking Ltd. has acquired all shares of the Premay Group of Companies, including Premay Equipment Ltd., Premay Pipeline Hauling Ltd. and Premay Sales & Rentals Ltd. The Premay Group of Companies produces synergies with Mullen Trucking. For example, prior to the acquisition, Premay was more concentrated on the ultra-heavy haul (over 100,000 lbs.), while Mullen focused on the more traditional heavy-haul loads (50,000 to 100,000 lbs.) and the high-end flatdeck market. With the wider product and service lines, the Mullen/Premay group can now bid together for traffic that requires both types of hauling.

based in Burlington, Ontario the parent firm of Canada's largest auto transporter, Auto Haulaway. The result is a large auto hauling carrier operating in the transborder market with seamless delivery services offered to auto manufacturers.

Freight distributor Vitran Corp. Inc. of Toronto has bought a major U.S. trucking company, Indianapolis-based Overland Group. In Canada, Vitran operates LTL carriers G&W Freightways in Ontario and Quebec; Trans-Western Express in central and western Canada and the western U.S.; and Can-Am LTL between Chicago and Toronto. In addition, Vitran has logistics, warehousing, contract cartage and distribution units in Tampa and Toronto. The acquisition will boost Vitran's revenues, expand its network coverage and allow each company to supplement areas in which the other company is not as strong. Overland Group subsidiaries include regional less-than-truckload carrier Overland Transportation System, which operates 28 terminals in the Midwest. Until now, Vitran's trucks have hauled freight in Ontario, Quebec, Manitoba and points west. This acquisition will allow Vitran to expand into the midcontinental U.S., in both the TL and LTL segments, and help it take advantage of a growing trend by its customers to distribute more goods in a north-south flow.

Table 6.3

Canadian Trucking Firms Interviewed Having Acquired an Interest in or Control of Another Canadian Trucking Firm

	1991	1993	1994
Number of firms	12	12	5
As a proportion of sample	11.4%	11.8%	5%

Source: Agency's Motor Carrier Survey

Some of the more notable mergers and acquisitions of 1994 include the purchase of CP Express and Transport (now called Interlink)

Allied Holdings, an auto-hauling carrier of Decatur, Ga., became a major North American auto hauler by acquiring Auto-Trans Holdings

As part of an effort to streamline its Automotive Carrier Division, Ryder System has merged two Canadian haulers, Automobile Carriers Ltd. and Motor Carriers Ltd., in response to a shift in the market. Consolidating the two Ryder companies will reduce administra-

tive tasks and overhead costs. A single company will also facilitate a smoother flow of people and equipment, which in turn should improve delivery time and overall efficiency.

Trimac Transportation System expanded its dedicated contract services with the purchase of the private fleet business of Provmar Fuel of Hamilton, Ontario. Trimac has a five-year contract to haul fuels produced by Provmar.

Group Guilbault Inc. of Quebec indirectly acquired all the assets of Transport Th  berge Lt  e and Th  berge Express Inc. of Rimouski. The purchase expands Guilbault from about 150 trailers and 50 tractors to almost 1,100 pieces of equipment and 600 employees. Guilbault operates both TL and LTL services in Quebec, Ontario and the Atlantic provinces, plus TL to the U.S.

Federal Industries, which has been trying to divest its transportation business for several years, agreed to sell its subsidiary, Consolidated Fastrate Transport, to a management group. A new company, called Consolidated Fastrate, will be created to buy the assets, which consist of its business contacts and customer lists, a local pickup and delivery fleet and 13 terminals.

Of the trucking firms that were interviewed by the Agency, five companies reported that they had acquired interest in or control of another Canadian trucking firm.

Each year, the magazine *Today's Trucking* ranks the top trucking firms in Canada based on fleet size. This

Table 6.4
Top 40 Canadian Trucking Firms — 1994

	Rank 1994	Rank 1993	Total Vehicles in 1994
TNT Canada	1	2	3,779
CP Express & Transport	2	5	3,540
J.D. Irving Ltd.	3	n/a	3,419
Trimac Transportation System	4	3	3,412
Reimer Express Group of Companies	5	10	3,272
Robert Transport Group	6	6	2,870
SLH Transport	7	4	2,835
Paul's Hauling Group	8	7	2,668
Cabano Transport Group	9	8	2,520
Westminster Holdings	10	n/a	2,268
Frederick Ltd.	11	17	1,945
Auto Haulaway	12	12	1,850
Brookville Transport	13	26	1,843
Arnold Bros. Transport	14	14	1,745
Day & Ross Transportation Group ¹	15	15	1,695
Laidlaw Carriers ²	16	18	1,656
Tri-Line Expressways	17	24	1,588
Vitran Corporation	18	n/a	1,577
Kleysen Transport	19	13	1,550
Canadian Freightways Group	20	n/a	1,548
Amour Transportation Systems	21	27	1,465
Byers Transportation Systems	22	23	1,459
Transport Guilbault	23	50	1,453
Wilson's Truck Lines	24	21	1,450
Les Transports Provost	25	20	1,445
Mullen Trucking	26	43	1,295
Kindersley Transport	27	30	1,280
Challenger Motor Freight	28	31	1,275
TransX ²	29	28	1,260
N. Yanke Transfer	30	52	1,251
Arrow Transportation System	31	41	1,196
Manitoulin Transport Group	32	32	1,113
XTL Transport	33	35	1,060
Canada Cartage System	34	34	1,060
Bruce R. Smith Ltd.	35	n/a	966
Cooney Group	36	45	965
Clarke Transport	37	48	941
Groupe Papineau	38	33	937
Verspeeten Cartage	39	53	931
Hunterline Trucking	40	38	928

¹ Same day Courier figures not included

² Estimated

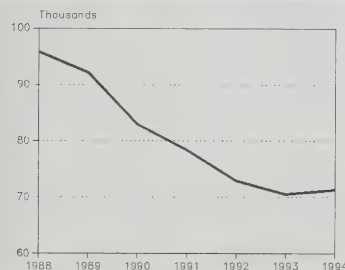
Source: *Today's Trucking*, March 1995

year, TNT Canada jumped from position number two to the top of the list (Table 6.4). The TNT group of carriers is the new top Canadian trucking firm in terms of vehicles. TNT with its subsidiaries has always held an important spot in the ranking of the top carriers.

This year, reporting the top trucking firms in Canada was done differently. *Today's Trucking* has consolidated firms according to their ownership under some sort of conglomerate approach. Consequently, J.D. Irving Ltd. and Canadian Freightways Group are included on the list for the first time.

In 1994, the total number of vehicles used by the Top 40 carriers grew modestly (Figure 6.6). This growth is partly due to the steady purchase of trucks by for-hire carriers. However, the carriers are not necessarily expanding their fleet size in the process, but rather replacing their fleets.

Figure 6.6
Total Number of Vehicles in the Fleet of the Top 40 Canadian Trucking Firms



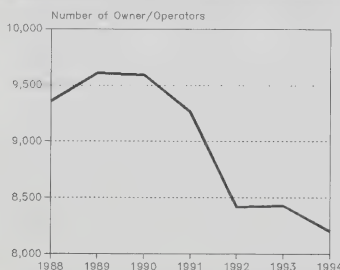
Source: *Today's Trucking*

Figure 6.6 shows the total number of vehicles in the fleet of the Top 40 Canadian trucking firms ranked by *Today's Trucking*. The declines in the period 1988 to 1993 were attributable to events such as the sale

of subsidiaries, mergers, acquisitions and exit from the market. These events show larger decreases than usual due to the reporting of the data. When collecting the information the large subsidiaries of corporate groups like Federal Industries or CP Trucks were listed separately but also included in the total. So when Kingsway was sold in 1993 the resulting decline was actually double counted. It should be noted that this method of reporting was changed in 1994 and the large subsidiaries were included in the corporate groups only.

The Top 40 carriers used fewer owner-operators than 1993 (Figure 6.7). The reason for the decrease is explained not by less need to use them but by a shortage of owner-operators.

Figure 6.7
Number of Owner-Operators Used by the Top 40 Canadian Trucking Firms



Source: *Today's Trucking*

MOTOR CARRIER OPERATIONS

To remain responsive to shippers' needs in an expanding and more competitive economy, Canadian trucking companies continue to offer a wider range of services. Despite the many new services offered by the trucking industry, the top three

factors emphasized by shippers, according to trucking managers consulted by the Agency, are price, service frequency and carrier response/innovation.

In a less regulated environment, both domestically and internationally, the industry focuses much more on customers, service and price, than on lanes and routes. As a result, shippers now have more service and product options for transporting their freight by truck. Complying with the customer-imposed quality standards will be the key success factor in the future for motor carrier managers. Some trucking firms are complying with customer-imposed quality standards by adopting the International Standard's Organization's ISO 9000 initiative. ISO 9000 certification is a series of international norms that apply across all industrial sectors. To this end, the Canadian Trucking Association Quality Institute assists carriers in all phases of the process leading to ISO 9000 certification.

Product Lines - Beyond Trucking

Pressure from competition has been driving shippers to better manage their logistics needs and to re-examine their distribution/supply chain functions. Consequently, some shippers have cut down on the number of carriers they use. This effort to conduct business with only a core list of firms is known as the "core carrier" concept.

Shippers prefer core carriers because:

- they have fewer carriers with which to negotiate and fewer

places to look when tracking freight;

- chosen carriers are managed so that the service quality supports shippers' just-in-time inventory systems;
- chosen carriers tend to be financially stable (and therefore can be counted on to perform over the longer term);
- they receive a higher level of service quality;
- their administrative burden and associated costs are reduced; and
- they obtain improved electronic data interchange (EDI).

Besides the introduction of the core carrier concept, some shippers, which were using their own fleet of trucks, have converted back to for-hire services as a result of wider service offerings by for-hire trucking firms.

The decision to revert to for-hire services has been made possible wherever both carrier and shipper can benefit, i.e., in situations where:

- it allows each party to focus on core business activities. For example, shippers prefer to free capital for their core manufacturing or distribution businesses by reducing their transportation costs as much as possible, and better match capacity to demand;
- truckload carriers can purchase equipment, hire drivers, purchase fuel, and operate more efficiently;
- it reduces overall transportation costs to the shipper, since truckload carriers can blend freight of one shipper with the freight of others to reduce empty miles; and

- they improve equipment use for carriers with back-hauls.

With the marketplace changing rapidly, the new products and services offered by trucking companies are driven more by knowledge of customer need than by assets. The trend now is to integrate products and services with the logistics and distribution patterns of their customers. Examples of value-added services offered by trucking companies include contract logistics and related services such as air and marine freight forwarding; customs brokerage; intermodal rail services; warehousing/distribution; documentation; insurance; expedited; and zero inventory distribution systems/just-in-time inventory deliveries, to name a few.

Network Coverage

Domestically, Canadian motor carriers operate both an intra-provincial and an extra-provincial service. Extra-provincial includes transborder operations into the U.S. The majority of carriers consulted by the Agency reported having operating authorities for all ten provinces. Although they may not operate all the time in all ten provinces, carriers prefer such authorities so they can respond to changing market conditions and seize opportunities as they arise. In addition, many western Canadian carriers consulted also held licences for the Yukon and NWT, reflecting the importance of centres such as Vancouver and Edmonton as important cargo distribution and resupply gateways to Canada's northern and remote regions. For example, Northwest Trucking of Edmonton operates up to six daily

frequencies between Edmonton and Yellowknife, interlining with NWT Air at Yellowknife for distribution to communities accessible only by air.

Carriers operating in the U.S. continue to grow alongside increasing north-south traffic and shipper distribution patterns shaped by NAFTA. Eighty-three per cent of respondents to the Agency Motor Carrier Survey held an operating licence from the ICC. The majority (78 per cent) of carriers have ICC licences for all 48 continental states.

The remaining 22 per cent of carriers interviewed have U.S. operations ranging between just one state to 39. For example, some carriers operate only in the U.S. northeast corridor since that is their core market, while others may operate only in one U.S. mid-west state as part of its core service. Five per cent of carriers consulted during the Agency's 1994 consultation program, indicated that they had established a base in the United States to serve their Canada-U.S. traffic.

Despite easier entry into the Mexican market made possible by NAFTA and the March 1994 Canada-Mexico Memorandum of Understanding, which permits entry into a 20 km zone, few Canadian carriers have yet to add Mexican authorities or start a base of operations in Mexico to serve Canada-Mexico traffic. Rather, most still prefer to interline at the U.S. border with U.S. or Mexican carriers. In October 1994, Challenger Motor Freight of Cambridge, Ontario became the first Canadian carrier into the Mexican free trade zone under the Canada-Mexico MOU.

Intermodal Strategies

During 1994, the trucking industry continued forging links with other modes. Among the motor carriers consulted by the Agency in 1994, 54 per cent of respondents indicated that they participate with other modes of transportation. Of that group, 48 per cent participated with the railways (for both domestic and transborder), seven per cent with marine, and another two per cent with airlines. Thirteen per cent of trucking firms consulted did intermodal business with the air, marine and railway modes. Approximately one-quarter of the motor carriers consulted, entered into formal arrangements with other modal carriers. Forty-two per cent of carriers used strategic alliances to participate in intermodal operations, while 50 per cent used less formal interline/commercial agreements.

Traditionally, the trucking industry competed head-on with other freight modes. Although this competition continues, intermodal co-operation is growing. For example, railways continued to aggressively develop dedicated intermodal services targeted primarily at the long-haul truckload market. The railways acknowledge that trucking can better meet customer expectations on short-distance hauls such as Toronto-Montreal. Even for intermediate distances such as Montreal/Toronto-Chicago, trucks can reliably deliver faster than the railways and offer other service attributes, such as door-to-door delivery. While railways continue their ability to carry time-sensitive products in short-haul markets, most of their focus is on gaining traffic in long-haul high-density markets for their

intermodal container and truck trailer products.

Railways now offer a wide range of products and plans. Intermodal trucking customers can choose from a variety of combinations or forms of intermodal equipment ownership, pick-up and delivery, handling, storage, stuffing, destuffing and other logistics-related services. Canadian railways offer technologies that go beyond just containers and trailer on flat-car intermodal services. Rail intermodal services also include such innovations as RoadRailer and the Iron Highway among others. In a truck-rail intermodal arrangement, the trucking firms maintain customer contact and their responsibility for service quality since the rail linehaul is essentially invisible to the shipper.

Long-haul truckload carriers that use rail intermodal do so for several reasons, such as:

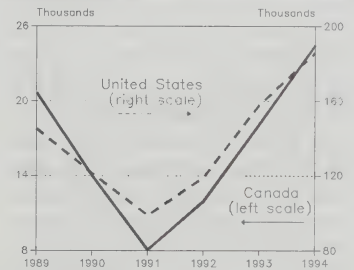
- lower fuel costs, since railways are more fuel efficient in long-haul markets;
- reduced driver turnover and therefore lower costs for recruitment and training, since railways take freight for the long-hauls allowing drivers to do more driving locally and get home more often;
- lower capital costs, since the railways supply the power unit saving the use of an over-the-road power tractor; and
- the combination of the TL firm's marketing and quality-control skills with service improvement from the railway allows the trucker to maintain service quality for its customers with lower costs.

Agreements between trucking companies and railways include Reimer Express and Canadian National; Maritime-Ontario and Canadian National; Kleysen Transport and Canadian National; and N. Yanke Transfer and Canadian Pacific. Listed in Table 6.5 are detailed examples of truck carriers' formal intermodal agreements with Canadian railways. Approximately half of the carriers consulted by the Agency during 1994 indicated that, in terms of traffic volume, intermodal represented about 13 per cent of total freight volume moved. This accounts for about 14 per cent of revenue.

Fleet and Re-equipment Strategies

Many trucking companies acquired new equipment in 1994 as they started to replace fleets. However, with so many carriers placing equipment orders with truck manufacturers, delivery was often delayed as manufacturers struggled with a growing backlog of orders. Figure 6.8 and 6.9 outline Canada-U.S. Class 8 Equipment sales between 1989 and 1994 and new

Figure 6.8
Canada-U.S. Class 8
Equipment Sales



Source: Motor Vehicle Manufacturers' Association, *Transport Topics*

Table 6.5

Example of Truck Carriers' Rail Intermodal Agreements

	Maritime-Ontario Freight Lines (a less-than-truckload carrier with 300 trailers)	Kleysen Transport Limited (a truckload carrier with 1,200 trailers)	N. Yanke Transfer Limited (a truckload carrier with 700 trailers)
With	CN	CN	CP
When	1993	1994	1994
Where	Domestic: CN's Toronto/Montreal to Moncton/Halifax COFC double stack service (eastbound only)	Domestic and Transborder: CN's COFC double stack network, except east of Montreal	Domestic: CP's intermodal network
What	Replace over-the-road trailers by COFC double stack ¹	Initially: Attract new freight with container based service. Longer Term: Replace TOFC	Replace long haul over-the-road trailers by containers
Equipment	Leased: CN owned containers (48') and chassis	Initially: Purchased (\$5m) containers (60-48' refrigerated) and chassis (100). Longer Term: \$25m over subsequent 10 years to purchase 100-200 containers a year	Initially: Purchased containers (100-48') and chassis (120). Longer Term: Acquire additional equipment
Marketing	Truck carrier	Truck carrier	Truck carrier
Reason/ Advantage for Trucking Company	Equipment utilization: CN responsible for filling containers westbound ² Driver availability: Expects future difficulty hiring qualified drivers	Market opportunities	Equipment requirements: Reduced Drivers: Alleviates safety concerns from high turnover rates

¹ Railway departure schedule makes replacement possible for only half of the shipments.

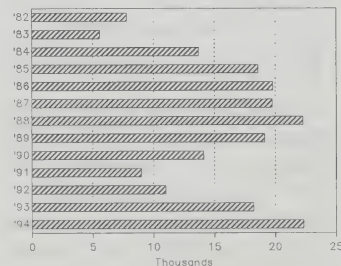
² Truck carrier's freight is directionally highly unbalanced.

Source: Transport Canada and Carriers

Class 8 Registrations between 1982 and 1994.

Equipment delivery delays of up to 18 months were common. Some larger carriers avoid equipment backlog problems in their fleets, by having a three-year replacement cycle policy for tractors. In many cases, the three-year policy was stretched slightly in 1994, because manufacturers could not deliver in time. In general, over-the-road heavy duty trucks can travel between

Figure 6.9
New Class 8 Registrations
1982-1994



Source: R.L. Polk & Co. Ltd.

150,000 and 200,000 miles a year, for up to five years.

Once power units (tractors) reach the high mileage levels, they are usually moved into lower utilization applications, in which their higher downtime is not so much an operational issue. Although an older fleet may not be as fuel efficient, most trucking managers feel it can still handle customer demands. Several trucking executives expressed the view that a younger fleet enhances the company's ability

to recruit and retain drivers. Moreover, a younger, more efficient fleet also means lower fuel costs and fewer repairs and breakdowns, in turn leading to reduced costs for mechanics and associated overhead. All this translates into better cash flow which can be re-invested.

Carrier officials interviewed continually stated that new equipment not only reduces operating costs and improves driver morale, but also helps to keep clients. Carriers felt that shippers often measured the carrier's performance and service quality by looking at the age and quality of the carrier's equipment.

The Agency sample of motor carriers interviewed in 1994 gave the following averages for carrier equipment utilization:

Power units 4 years
Trailers 7 years

For average fleet age, results of the interviews show that 51 per cent of power units (tractors) are three years old or less. Eighty-seven per cent of the power units are five years or less. However, as is the industry norm, the majority of trailers are between three and eight years of age. Carriers reported that they had operated 16 per cent of their trailers for more than ten years. One reason that carriers have had to retain existing equipment is the expense in buying new equipment. Also, increased traffic volumes during 1994 caused carriers to use equipment they would otherwise have retired.

Registrations of new Class 8 vehicles set a record in 1994, eclipsing the high set in 1988

(22,331 vs 22,297). Table 6.6 shows the new Class 8 registrations in Canada. Registrations increased in all provinces except for New Brunswick and Manitoba.

Table 6.6
New Class 8¹ Registrations in
Canada, By Province
1993 - 1994

	1993	1994
Nfld.	77	90
P.E.I.	59	67
N.S.	470	508
N.B.	804	520
Quebec	3,841	5,012
Ontario	6,378	8,778
Manitoba	595	360
Sask.	632	821
Alberta	3,376	3,953
B.C.	1,968	2,222
Total	18,200	22,331

¹ Vehicles weighing more than 14,966 kgs.

Source: R.L. Polk & Co. Ltd.

Table 6.7 shows how carriers managed their equipment resources. Almost half (47 per cent) of the carriers surveyed both added and replaced equipment in their fleet. On the other hand, five per cent of carriers indicated they reduced the size of their fleet because they had withdrawn their services (and equipment) from markets that were either no longer profitable or did not earn enough revenue to justify the purchase of new equipment.

Fleet Financing

Although purchasing (with either debt or working capital) is still the most popular technique for fleet and

Table 6.7
1994 Fleet Strategies

	%
Added equipment only	14
Replaced equipment only	13
Added and replaced equipment	47
Reduced fleet size	5
Added, replaced and modified mix	11
Replaced, reduced and modified mix	1
Replaced and reduced equipment	8
Replaced and modified mix	2

Source: 1994 Agency's Motor Carrier Survey

equipment acquisition, growing numbers of trucking companies are choosing to lease rather than purchase their power or equipment, a trend that is giving a boost to the truck leasing industry. Trucking firms are discovering that they are less in the equipment business, and more in the business of providing the best possible service for their customers. Full service leasing is among the fastest growing techniques for financing fleet acquisitions. The advantages of lease financing include: cost savings associated with not having in-house maintenance facilities (land, buildings, taxes, utilities, technical personnel, equipment, inventory, management and training); emergency road services provided by the leasing company; capital is not

tied up in equipments; lease expenses can be recorded as an operating expense with associated tax benefits.

Carriers were almost equally divided between purchasing or leasing their power equipment. However, most carriers reported purchasing all of their new trailers whereas most carriers preferred to lease their refrigerated trailer acquisitions.

Human Resource Management Issues

A major issue frequently raised during the Agency's consultations with the industry, was driver turnover among some TL firms. The majority of carriers (58 per cent) had a driver turnover rate of less than 20 per cent. Carriers reporting turnover rates of between 20 - 39 per cent represented 31 per cent of respondents. Details of other responses concerning driver turnover are shown in Table 6.8.

Table 6.8
Driver Turnover Rate (%)

	% Respondents
1-19	58
20-39	31
40-59	6
60-80	2
80-100	3

Source: 1994 Agency's Motor Carrier Survey

Lifestyle concerns such as the length of time away from home and/or better paying opportunities are

among the main factors explaining the driver turnover issue, especially in the long-haul TL markets. Most TL loads are done on the basis of irregular routes, so the driver does not know from one week to the next where he/she will be travelling. Companies are taking a number of steps to lower driver turnover, including:

- Getting the driver home more often. This is done through: better route planning; entering into dedicated market arrangements in which a driver usually maintains a regular route for a customer; or, concentrating on regional markets in which drivers stay near home;
- Endeavoring to secure driver-friendly freight, which requires little, if any, driver assisted loading or unloading;
- Using targeted recruiting, where companies will pay up-front for experienced drivers instead of using lower paid inexperienced drivers or trainees;
- Paying drivers more per mile;
- Offering other financial incentives such as operational bonuses to drivers for better fuel mileage, on-time service and better equipment utilization and profit-sharing plans; and
- Creating a better work environment with on-board computers in their tractors to ease communication with the company's headquarters. Some carriers have also higher sensitivity training to non-driver personnel to improve their understanding of the driver's situation.

Owner-operators represented the largest single growing segment of employees for trucking firms

consulted by the Agency. Over 40 per cent of carriers reported replacing some of their company drivers with owner-operators. Almost equal proportions of carriers reported either an increase in owner-operators or the same number as last year (41 per cent vs 35 per cent; Table 6.9).

Table 6.9
Reported Change in Carrier Use of Owner-Operators 1994 vs 1993

	%
Increase	41
Decrease	24
Remain the same	35

Source: 1994 Agency's Motor Carrier Interviews

Two-thirds of carriers surveyed had 50 or less owner-operators. Slightly over one-third of carriers (36 per cent) reported having fifty or fewer company drivers in addition to having 50 or fewer owner-operators. This is to be expected as most small carriers hire owner-operators for additional capacity whenever business grows. Also, very large carriers use large numbers of owner-operators as a means of reducing overhead costs while still having the flexibility to respond quickly to changes in traffic volumes. It should be noted that there is no correlation between the number of drivers and the number of owner-operators in the responses obtained; that is, they are mutually exclusive.

Technology and Management Information Systems

Technology and Management Information Systems (MIS) are important tools for carriers. Computer technology is used in new electronic engines to monitor engine performance and provide the driver with information that can minimize engine wear, reduce fuel consumption and diagnose the vehicle's overall performance. Software in the cab allows drivers to communicate directly with dispatch without wasting time at telephone stops.

Through satellite-tracking systems, dispatch offices can instantly determine the location of their vehicles, including the location of stolen equipment. Customers are better served because they can obtain daily if not hourly information on the whereabouts or status of their goods in transit. In-cab communication systems result in better carrier performance due to the ability of the driver to respond to last minute changes in routing or scheduling. All of this leads to better driver morale and improved customer satisfaction.

Electronic Data Interchange (EDI)

Electronics come in four different forms for the trucking industry:

- Computer hardware and software for the office;
- Computer hardware and software for the vehicle itself;
- Communications links to dispatch and satellite tracking;
- Communications links to shippers and parcel tracking.

To obtain a competitive edge and provide better service to shippers, carriers are investing heavily in the equipment and software necessary to computerize their operations. The Agency's Motor Carrier Survey determined that 60 per cent of carriers are now using some form of Electronic Data Interchange (EDI), and that 73 per cent of these experienced positive results for their firms. Interestingly, 21 per cent stated that they had no opinion on whether their EDI experience was either positive or negative.

The uses of EDI are listed below in order of importance. Note that carriers could give more than one response:

- Accounting/billing (39%)
- Links to shipper (38%)
- Links to dispatch (27%)
- Vehicle diagnostics/maintenance (16%)
- Equipment tracking by satellite (13%)
- LTL/Small parcels (courier) (9%)

Carriers responding gave these reasons for starting to use EDI:

- Shippers demanded it (34%)
- To remain competitive (22%)
- For tracking purposes (15%)
- Fleet equipment tracking (14%)
- To find interline loads (7%)

Carriers using Global Positioning Systems (GPS) have a marked advantage over those carriers who do not. With GPS, it is possible to display the exact location of a vehicle on electronic maps. In addition, systems are available that will access and display geo-referenced travel information from a variety of databases. These

databases provide information on food and fuel service locations and provide detailed city maps with address locators.

Two-way satellite communications between trucks and dispatchers can do more than locate trucks in an instant. Dispatch is able to inform drivers of weather conditions, closed roads, scheduling changes, or anything else that a driver needs to know.

Carriers reported during interviews that once drivers overcome their initial reluctance to having a computer in the cab, they become reluctant to drive a vehicle without one. Drivers regard their computer as a tool which allows them to provide quality service with less chance of error. For example, if a driver is ahead of schedule (or delayed), he/she can contact the dispatcher who then contacts the client. The client can adjust the work flow to match the driver's delivery time. In this manner, the client feels that the carrier is offering a professional service and the driver minimizes wait time at the loading dock.

1994 TRUCKING TRAFFIC AND COMPETITION

In trucking terms, traffic is related to the demand for the volume of goods to be transported. Competition occurs not only between individual carriers, but also between different transportation modes and market segments such as TL and LTL. Inter-provincial, extra-provincial and

international markets also affect carriers' volumes.

Like other Canadian transportation services, trucking expands and contracts with changes in the economy, typically with about six-month lags.

Important economic factors that determine traffic volumes in trucking include domestic factory production; retail sales; inventory trends; international trade, and occasionally, rail labour disputes that divert traffic to the trucking mode.

Major competitive factors affecting the Canadian for-hire trucking

business include private truck fleets owned by shippers and growing competition between trucking segments. Compared to other modes, for-hire trucking services are more flexible than railroads in short-haul markets between 750 and 1200 kilometres (500-750 miles), although competing rail products are continually closing this advantage.

Trucking firms provide cheaper, but usually slower, delivery schedules than competing air-cargo products. In recent years, trucking companies have been innovative in the time sensitive market by offering near-air freight services. They have narrowed the gap with air cargo

elapsed delivery times but at lower freight rates.

Traffic

During 1994, carriers reported significant traffic volume increases across all trucking market segments. Strong growth in the Canadian economy pushed up traffic volumes as central Canada's manufacturing sectors and trade activities with the U.S. increased their demands for trucking services.

The lower value of the Canadian dollar enhanced the competitiveness of Canada's exports and led to more Canada-U.S. traffic.

Top Ten Strategies of Successful Carriers

Research by the University of Georgia examined the strategies used by top executives at some of the most profitable trucking companies in the U.S. The researchers surveyed and interviewed 140 truckload carrier executives and 23 less-than-truckload carrier executives to determine how the more successful managers differ from their peers. All respondents were asked to rank 49 strategies ranging from marketing to cost control, computers to employee productivity. Carriers with operating ratios of 0.92 or lower were considered the most profitable.

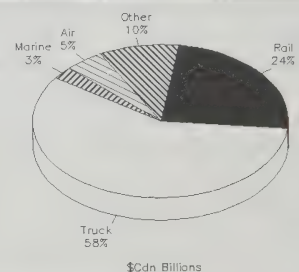
Ranked in order of priority, the top ten strategies pursued by the most profitable U.S. truckload carriers during the last three years were:

- Increased equipment productivity
- Improved safety
- Increased employee productivity
- Controlled costs
- Increased fuel efficiency
- Improved lane balancing
- Improved cash flow
- Differentiated by service quality
- Reduced driver turnover
- Increased computer capability.

Source: University of Georgia

A large portion of Canada's exports to the U.S. are by truck. Figures 6.10 and 6.11 show that in 1994, trucks carried 58 per cent of exports (\$107.2 billion), and 81 per cent of imports (\$110.8 billion) to/from the U.S. Compared to 1993, this represents a 23.5 per cent and a 19 per cent increase in the value of trade moved by truck for exports and imports, respectively.

Figure 6.10
1994 Export Trade to the U.S.
by Mode

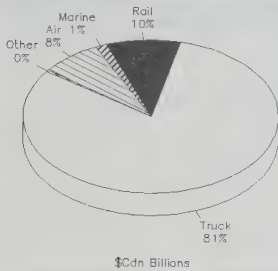


Source: Statistics Canada

Figures 6.12 through 6.16 show the level of change in traffic volume by trucking segment. During the

Agency's 1994 motor carrier consultations, a larger percentage of carriers reported increases than decreases in traffic volumes. Approximately 20 per cent of general freight carriers reported no change in traffic volumes for 1994.

Figure 6.11
1994 Import Trade from the U.S.
by Mode



Source: Statistics Canada

For both domestic and international truckload and less-than truckload markets, the majority of carriers reported increases in the five to 19 per cent range. Appendix A.3 provides details on the changes by traffic segment in 1994 compared to 1993.

Domestic TL

Results from the 1994 Motor Carrier Survey and consultations indicate that 66 per cent of domestic TL carriers had an increase in traffic volumes. One out of five (22 per cent) carriers reported a traffic increase in the range of ten to 19 per cent. This was followed closely by 19 per cent of carriers reporting an increase in traffic in the range of five to nine per cent. Fourteen per cent reported a significant increase in the range of 20 to 29 per cent with one per cent reporting traffic gains of 30 to 39 per cent.

In addition, the continuing tendency of shippers to choose core carriers also translated into higher freight volumes for successful carriers in this segment. From a TL carrier's perspective, the ability to capture that increased demand was a function of being able to put in place the appropriate capacity, i.e., driver and equipment needed to satisfy demand.

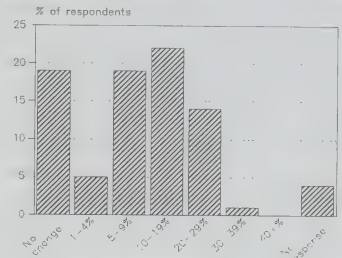
From a competition aspect, traffic gains or losses are of two kinds: inter-modal and intra-modal. Further, in both cases the source of the traffic can be: existing clients giving more/less traffic, and/or clients shifting to/from one carrier to another. From an intra-modal perspective, 43 per cent of carriers who reported increases in domestic TL stated that this traffic was obtained from other Canadian-based carriers. This increase was mostly in the 10 to 19 per cent range, but gains in the range of five to nine per cent were also reported.

Interestingly, 12 per cent of carriers reported increased domestic TL volume was obtained at the expense of private carriers. This demonstrates that more and more shippers are collapsing their private fleet to use for-hire trucking services.

Approximately one out of five carriers (19 per cent) reported no change in their domestic TL traffic volume from 1993 to 1994.

For carriers who reported decreases (14 per cent of respondents), more carriers reported traffic losses in the five to nine per cent range, followed by carriers with losses in the 20 to 29 per cent range. Many carriers in

Figure 6.12
Changes in Traffic Volume Increase
Domestic Truckload - 1994 vs 1993



Source: 1994 Agency's Motor Carrier Survey

this category were serving a small number of clients from which the bulk of their revenues were generated, and some of these clients decided to change carriers.

From a client perspective, existing clients (53 per cent) were as important as new clients (47 per cent) in bringing more domestic TL traffic to carriers. In most cases, carriers achieved traffic gains through both existing and new clients, rather than from one or the other.

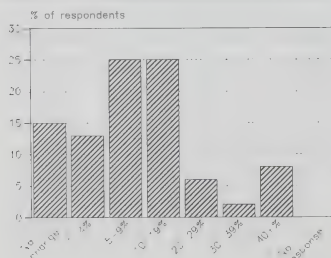
Domestic LTL

Of the carriers interviewed, about four out of five (79 per cent) of those offering domestic LTL services reported increased traffic volumes in 1994. An equal proportion of carriers reported gains ranging from five to nine per cent and from ten to 19 per cent. Another 13 per cent reported gains between one and four per cent. While no domestic TL carriers reported gains over 40 per cent, eight per cent of LTL carriers reported that they did so. LTL carriers also benefitted to some degree from spillover from the TL segment, where driver shortages are

still a major issue.

The gains in domestic LTL traffic came primarily from other Canadian-based carriers (56 per cent) with the proportion of carriers reporting gains in the range of five to nine per cent being nearly equal to the ones reporting increases of ten to 19 per cent. According to those interviewed, alliances with other carriers was the second most common reason for domestic LTL volume increases. Next was traffic gains from private carriers and the next most common reason was traffic gains from U.S.-based carriers. The depreciation of the Canadian dollar relative to the U.S. dollar was undoubtedly a factor in the increase in LTL traffic gains achieved from U.S.-based carriers.

Figure 6.13
Changes in Traffic Volume Increase
Domestic Less-Than-Truckload
1994 vs 1993



Source: 1994 Agency's Motor Carrier Survey

In terms of client sources, traffic gains were again almost evenly split between existing clients (52 per cent) and new clients (48 per cent).

A smaller proportion of LTL carriers reported no change (15 per cent) in their traffic volumes in 1994, compared to those in the domestic

TL market segment (19 per cent) reporting no change.

Similarly, a smaller proportion of domestic LTL carriers reported losses (six per cent) when compared to domestic TL (14 per cent). The losses for LTL carriers were lower (one to four per cent).

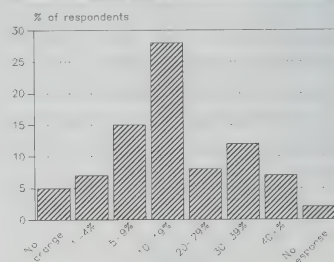
The overall consensus was that traffic volume growth in domestic LTL operations was very healthy in 1994.

International TL

The weak Canadian dollar combined with the influence of NAFTA and the corresponding increase in north-south traffic flows, resulted in 78 per cent of TL carriers operating in the transborder market reporting an increase in traffic volume for 1994. Twenty-three per cent of carriers interviewed and which operated in this market segment, experienced increases of one to nine per cent. Over one-third of carriers (36 per cent) experienced growth of between ten and 29 per cent; with 12 per cent of carriers gaining between 30 to 39 per cent. Of particular interest, is that seven per cent of carriers reported growth of over 40 per cent. Five per cent of carriers experienced traffic declines of 40 per cent or more.

In competitive terms, when traffic was gained through competitive forces as opposed to increased demand, these traffic increases were reported as coming equally from both Canadian-based and U.S.-based carriers. Traffic gained from existing clients was matched evenly by traffic from new clients.

Figure 6.14
Change in Traffic Volume Increase
International Truckload - 1994 vs 1993



Source: 1994 Agency's Motor Carrier Survey

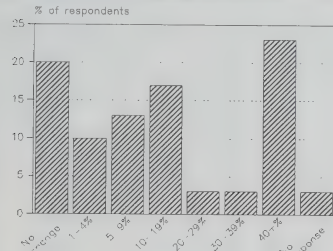
International LTL

Of the carriers interviewed, increased traffic growth was reported by 70 per cent of carriers having international LTL operations. The most significant result was that almost one in four (23 per cent) of these carriers experienced increases in transborder traffic volume of over 40 per cent. The second most significant growth occurred in the range of ten to 19 per cent as reported by 18 per cent of carriers. Growth rates of one to four per cent and five to nine per cent were claimed by ten per cent and 13 per cent of carriers, respectively.

Carriers who lost traffic did so in the one to four per cent range. This traffic was lost to U.S.-based carriers.

Again, for traffic increase resulting from competitive gains, it was gained evenly from both Canadian and U.S.-based carriers. As for the source of this increased traffic, 43 per cent said that it came from existing clients, while 57 per cent said new clients were the source.

Figure 6.15
Changes in Traffic Volume Increase
International Less-Than-Truckload
1994 vs 1993



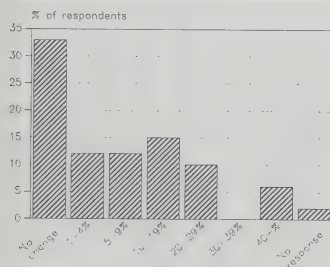
Source: 1994 Agency's Motor Carrier Survey

Specialty Carriers

Specialty carriers typically transport bulk commodities such as grain, fuel, cement, steel, etc. Within this market segment, 56 per cent of carriers said their specialty traffic went up. Fully one-third of carriers reported no change in traffic over the last year.

Twelve per cent of carriers interviewed reported traffic losses. This traffic was lost exclusively to Canadian-based carriers.

Figure 6.16
Changes in Traffic Volume Increase
Specialty - 1994 vs 1993



Source: 1994 Agency's Motor Carrier Survey

Two-thirds of carriers stated that their specialty traffic volume originated from existing clients,

while the remaining third said that their traffic originated with new clients.

In terms of competitive diversion of traffic volumes in the specialty segment, 28 per cent of carriers indicated that traffic was gained from Canadian-based carriers, while 14 per cent and ten per cent gained traffic from private and rail carriers, respectively.

Pricing

The pricing environment for Canadian trucking firms has been favorable because of the robust demand for TL and LTL freight services, according to carriers consulted. However, competition has kept prices lower than demand would warrant under such market conditions. In the TL sector, the driver shortage has given some pricing leeway to the carriers, and some carriers said that they planned to increase their rates in the range of two to five per cent. Carriers often repeated that no shipper will pay "listed" rates; rather, shippers prefer discounts or they will switch to another carrier. In response to such market conditions for pricing, carriers are becoming more selective about whose freight they handle, as they no longer permit dilution of their per mile yield. Increasingly, carriers have been using computerized load and yield optimization systems to help them select more profitable freight and help reduce empty miles capacity throughout their networks.

Motor Carrier Participation in Imports-Exports

Table 6.10 shows the total amount of trade generated by Canada for 1994. As demonstrated by Figures 6.17 and 6.18, and detailed in Table 6.11, the trucking industry continues to carry the largest share of the total value of trade between Canada and the U.S. In 1994, 58 per cent of exports to and 81 per cent of imports from the U.S.,

Figure 6.17
Percentage Exports
by Region - 1994

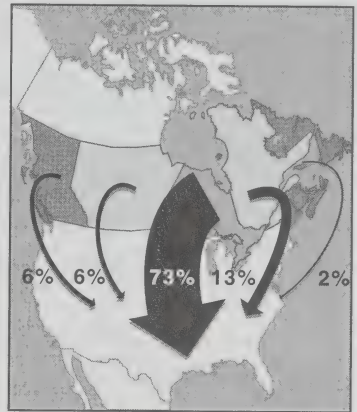
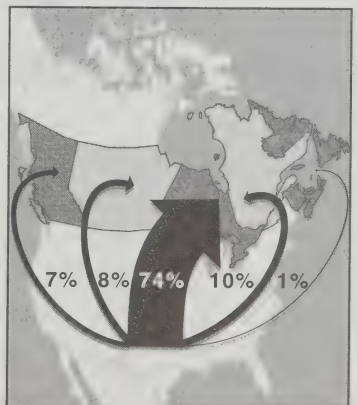


Figure 6.18
Percentage Imports
by Region - 1994



in dollar terms, were carried over the border by trucks.

Table 6.11 details Canada's trade with the U.S. by transportation mode. The percentage increase in transborder exports carried by truck (23.5 per cent), was slightly higher than the percentage increase achieved by imports (19 per cent).

On a regional basis, Figures 6.17 and 6.18 show the percentage of exports and imports transported by truck between Canada and the U.S. in 1994. Canada is divided into five economic zones: Atlantic, consisting of the three maritime provinces and Newfoundland; Quebec; Ontario; Prairie, consisting of Manitoba; Saskatchewan and; Alberta; and, Pacific. Ontario and Quebec account for approximately

85 per cent of all exports and imports carried by truck. It is interesting to note that, in dollar terms, Ontario has approximately equal percentages of total exports (73.2 per cent) to and total imports (73.6 per cent) from the U.S. This large percentage is directly related to the trade between automotive manufacturing plants located in Ontario and in the state of Michigan.

Table 6.10
Sources of Canada's Trade

	Exports			Imports		
	1993	1994	% change	1993	1994	% change
	<i>\$billions</i>					
U.S.	150.6	185.2	22.9	113.6	136.6	20.2
Mexico	0.8	1.05	31.3	3.6	4.5	25.0
Rest of the World	35.3	40.4	14.3	52.3	60.9	16.4
Total	186.7	226.6	21.4	169.5	202.0	19.2

Source: Statistics Canada

Table 6.11
Canada's Trade with the U.S. Broken Down by Mode

	Exports			Imports		
	1993	1994	% change	1993	1994	% change
	<i>\$billions</i>					
Truck	86.8	107.2	23.5	93.1	110.8	19.0
Rail	36.7	45.5	24.0	9.7	12.8	32.0
Marine	4.4	5.0	28.0	1.9	1.9	—
Air	6.8	9.0	32.4	8.6	10.5	22.1
Other	15.9	18.5	16.4	0.3	0.6	100.0
Total	150.6	185.2	23.0	113.6	136.6	20.2

Source: Statistics Canada

FINANCIAL PERFORMANCE

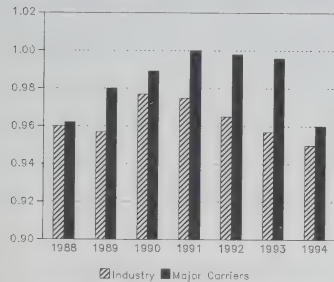
Higher traffic volumes during the 1994 economic recovery have been the dominant variable driving improved revenue and performance in the Canadian trucking industry.

The most commonly used measure in the trucking industry (and other transportation modes) to monitor financial performance is the operating ratio (operating expenses divided by operating revenues). In 1994, industry operating ratios throughout all trucking-industry segments continued to show signs of improvements that began in 1991.

In 1994, as in 1993, the vast majority of carriers (85 per cent) covered by the Agency's Motor Carrier Survey stated that their company's overall financial situation improved or remained stable. Improvements were reported by carriers operating in all market segments — Domestic TL and LTL, International TL and LTL. This finding is confirmed by Statistics Canada 1994 quarterly survey results, which showed a preliminary operating ratio of 95 per cent for the trucking industry as a whole (i.e., all carriers). In 1993, the

industry's operating ratio was 95.7 per cent (Figure 6.19).

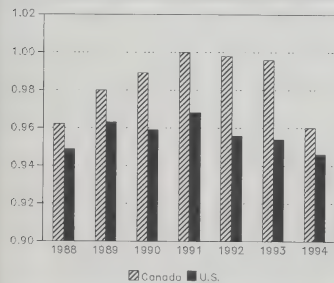
Figure 6.19
Operating Ratios of Trucking Firms
Industry Versus Major Carriers



Source: Statistics Canada

The operating ratio of major carriers of freight was at 96 per cent in 1994, a significant improvement over the 99.6 per cent ratio reported in 1993. This operating ratio was the best result posted over the last five years. Most financial analysts consider an operating ratio of 95 per cent as a sign of a healthy financial situation for the trucking industry.

Figure 6.20
Operating Ratios of Major Carriers
in Canada and in the U.S.



Source: Statistics Canada

As in previous years, operating ratios continued to be more favorable for U.S. major carriers than for Canadian major carriers. (Figure 6.20). However, a larger improvement was recorded on the Canadian side of the border. The

operating ratio for the U.S. trucking industry was estimated to be 94.6 per cent in 1994. According to the American Trucking Association, TL and LTL carriers had operating ratios of 92.3 per cent and 96 per cent, respectively. The 24-day Teamsters strike in April is reported to have cost U.S. Unionized LTL carriers an estimated \$1 billion or more in lost revenue which impacted their 1994 operating ratios.

Operating revenues

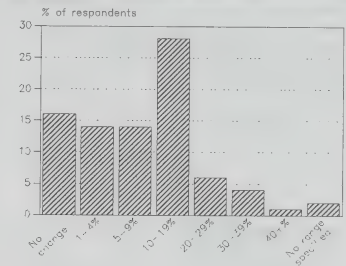
The higher volumes experienced by the industry translated into healthier operating revenues in all trucking segments during 1994.

Two-thirds of carriers who participated in the 1994 Motor Carrier Survey reported that their operating revenues were generated from hauling general freight, both TL and LTL. The remaining third of carriers reported that their operating revenues were generated by refrigerated service (reefer) (14 per cent), liquid bulk (ten per cent), dry bulk (seven per cent), and other (four per cent).

Motor carriers' domestic operations accounted for slightly more than three-quarters (77 per cent) of their operating revenues with the balance coming from transborder operations. Interestingly, both the domestic intra-provincial and extra-provincial markets were equally important in the effect they had on carriers' revenues (39 per cent). Cross-border trade accounted for 22 per cent of operating revenues and one per cent came from domestic U.S. operations for firms reporting operations of a U.S. affiliate.

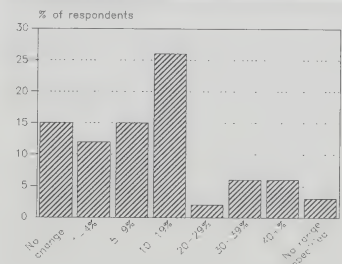
Figures 6.21 through 6.24 show the percentage change in operating revenues between 1993 and 1994, for both TL and LTL segments operating in domestic and international markets. The figures demonstrate that one out of four carriers, in all market segments, experienced a revenue increase in the range of ten to 19 per cent.

Figure 6.21
Increase in Operating Revenues
by Market Segment — Domestic TL



Source: 1994 Agency's Motor Carrier Survey

Figure 6.22
Increase in Operating Revenues by
Market Segment — Domestic LTL



Source: 1994 Agency's Motor Carrier Survey

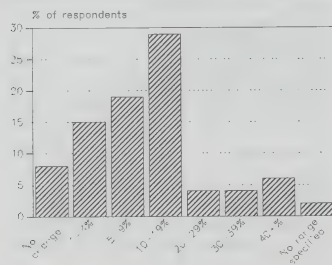
A greater percentage of carriers reported that operating revenues increased more in their transborder operations than in their domestic operations (Table 6.12). Operating revenues of some carriers increased dramatically. Approximately four

Table 6.12
**Proportion of Carriers Reporting
 Changes in Operating Revenues (%)**

	Domestic		International	
	TL	LTL	TL	LTL
Increase	69	70	81	75
No Change	16	15	8	21
Decrease	14	15	10	4

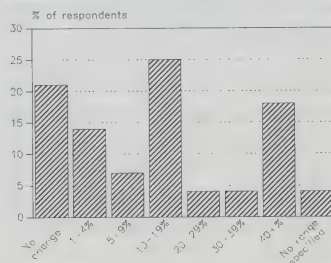
Source: 1994 Agency's Motor Carrier Survey

Figure 6.23
**Increase in Operating Revenues
 by Market Segment
 International (U.S.) TL**



Source: 1994 Agency's Motor Carrier Survey

Figure 6.24
**Increase in Operating Revenues
 by Market Segment
 International (U.S.) LTL**



Source: 1994 Agency's Motor Carrier Survey

per cent of carriers in each market segment reported increases of 30-39 per cent. With the exception of domestic TL, six per cent of carriers reported operating revenue increases greater than 40 per cent in domestic LTL and international TL. Eighteen per cent of carriers operating international LTL services recorded operating revenue gains greater than 40 per cent. A detailed table showing changes in operating revenue by market segment can be found in Appendix A.3.

interest expenses on debt financing or lease rental payments; and maintenance and depreciation/amortization expenses.

During consultations, carriers who had invested in new equipment stated that they expected to realize substantial fuel savings due to newer, more fuel efficient engines. In particular, many carriers were spending additional sums for electronic engine controls that would permit them to maximize engine performance on the basis of the type of load and distance involved. These fuel savings go directly to the carriers' bottom line and thereby increase their profits.

Market segment (TL, LTL, etc.) was not a major factor in determining whether a carrier listed one expense over another. In fact, fleet size and the associated maintenance burden, degree of computerization, local conditions including a carrier's cost-cutting initiatives and level of competition were more influential in determining how a carrier responded.

Key Expense Factors in Trucking

The relative importance of different expense categories in trucking operations is a function of the nature of the services offered by the carrier. Expenses are different between TL and LTL operations, domestic versus transborder, age and type of equipment, etc.

Carriers who participated in the 1994 Motor Carrier Survey reported that the major expense items in the trucking industry are labour costs consisting of salaries, wages and benefits; fuel costs including taxes; ownership costs which include

MARINE SERVICES

Highlights of 1994

Federal Government Undertakes Major Review of Marine Policy

The thrust of the review is to find ways to create efficient and affordable marine services. Downsizing, commercializing, and reducing subsidies are priorities.

Comuzzi Report Urges Action on St. Lawrence Seaway

A bi-national Canada/United States agency to jointly manage the Seaway is among the recommendations by the Parliamentary Sub-committee on the St. Lawrence Seaway. Replacing tolls and restructuring pilotage services are also recommended.

Canadian Pacific Ltd. Acquires Cast Marine

CP's Canada Maritime and Cast shipping lines will operate a total capacity of some 16,000 containers per week on the highly-competitive North Atlantic trade route.

Fednav Orders Four New Seaway-Size Vessels

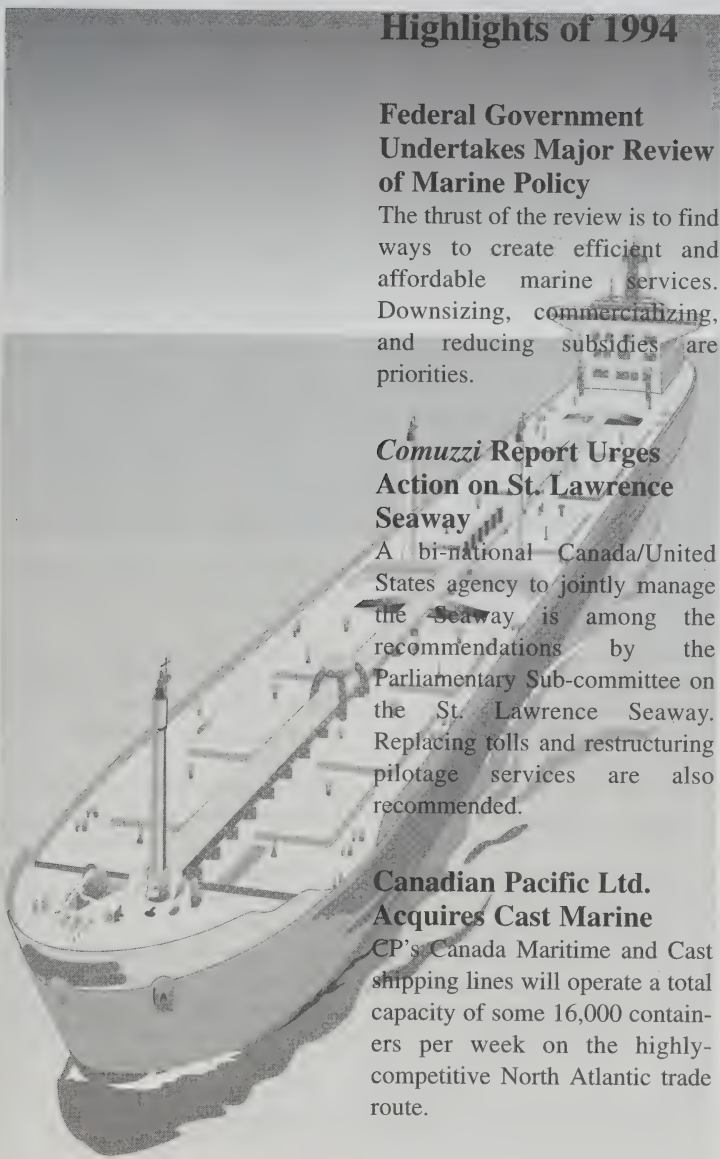
The 34,000 dwt ships will be built in China for delivery in 1996.

CruiseShip Industry Continues to Thrive

Industry contribution to Canada's economy is estimated at over \$150 million.

B.C. Ferries Announces \$800 Million Overhaul

Ten-year plan includes new terminals, upgraded facilities and introduction of fast ferries.



REGULATORY ENVIRONMENT

In mid-1994, the Minister of Transport announced a sweeping review of federal marine policy with the overall objective of ensuring the availability of affordable and effective marine transportation services to Canadians. The revised policy will endeavour to match infrastructure and service levels more realistically with user needs, and introduce the concept of commercialization or "user-pay". The process will also involve eliminating or replacing outdated legislation and regulations.

Federal Government Ownership of Marine Infrastructure and Equipment

Coast Guard fleet, harbours and ports, waterways systems, navigational aids, bases, communications, etc.

St. Lawrence Seaway: land, locks, channels, buildings, equipment

Ports Canada: Local Port Corporations at Montreal, Halifax, Vancouver, Quebec, Saint John, St. John's, Prince Rupert (including Ridley Terminals Inc.); Divisional Ports at Belledune, Churchill, Port Colborne, Prescott, Port Saguenay/Baie des Ha! Ha!, Sept-Îles and Trois-Rivières.

Marine Atlantic: ferry fleet, terminal facilities, equipment

Pilotage Authorities: pilot boats, equipment

Canarctic Shipping Company Limited: majority interest

Federal Legislation Governing the Marine Industry

- *Arctic Waters Pollution Prevention Act*
- *Atlantic Region Freight Assistance Act*
- *Canada Ports Corporation Act*
- *Canada Shipping Act*
- *Carriage of Goods by Water Act*
- *Coasting Trade Act*
- *Department of Transport Act*
- *Hamilton Harbour Commissioners Act*
- *Harbour Commissions Act*
- *Marine and Aviation War Risks Act*
- *Marine Insurance Act*
- *Montreal Port Wardens Act*
- *National Transportation Act, 1987*
- *Navigable Waters Protection Act*
- *Ontario Harbours Agreement Act*
- *Pilotage Act*
- *Public Harbours and Port Facilities Act*
- *Quebec Port Wardens Act*
- *Safe Containers Convention Act*
- *St. Lawrence Seaway Authority Act*
- *Shipping Conferences Exemption Act, 1987*
- *Toronto Harbour Commissioners Act*
- *United States Wreckers Act*

The Standing Committee on Transportation (SCOT) has a lead role in the policy review, conducting hearings at major centres across the country in its investigation of the national ports system, the St. Lawrence Seaway, the Canadian Coast Guard and Pilotage Authorities. On separate but related fronts, the Parliamentary (Comuzzi) Sub-Committee on the St. Lawrence Seaway submitted its report and recommendations in October, 1994; the Chamber of Maritime Commerce proposed a comprehensive public-private sector partnership arrangement to manage marine services; and a Marine Advisory Board, representing commercial shipping interests (including the Canadian Shipowners Association and the Shipping Federation of Canada), the fisheries, ferry operators, ports, shipyards, maritime labour and recreational boaters, has

been formed to present recommendations to the government.

The Comuzzi Sub-Committee on the St. Lawrence Seaway

Urging immediate and dramatic action to restore the viability of the St. Lawrence Seaway, the Committee made nine recommendations:

- The creation of a self-financing Canada-U.S. binational agency to manage and operate the Great Lakes/St. Lawrence Seaway System, and the exemption of the system from the (U.S.) *Jones Act* and the *Coasting Trade Act*.
- The replacement of the current toll system with a new harmonized cost recovery program similar to the U.S. ad valorem harbour

Federal Marine Budgets/ Expenditures* (\$000)

TRANSPORT CANADA	
COAST GUARD	
Marine Navigation Systems	280,462
Icebreaking & Arctic Operations	117,443
Marine Search & Rescue	79,697
Marine Regulatory	67,969
Public Harbours & Ports	56,082
Direction & Administration	12,835
Total	614,488
NATIONAL TRANSPORTATION AGENCY	1,256
TRANSPORTATION SAFETY BOARD	7,905
Total	623,649

* Excluding subsidies

Source: 1994-95 Main Estimates

maintenance tax based on tonnage.

- Repeal of *The Pilotage Act, 1972* and provision of pilotage services by the new binational agency.
- Reform of the *Western Grain Transportation Act* to eliminate distortions in grain shipment patterns.
- Extension of the Sub-Committee's mandate to study Canada's ports and harbours.
- Investigation of provincial and municipal costs borne by the Seaway and related facilities.
- Re-imbursement of the Seaway Authority's expenses for operation and maintenance of the Valleyfield, St. Louis and Mercier bridges and the Melocheville Tunnel.

Federal Marine Subsidies (\$000)

Marine Atlantic	127,774
BC Ferry & Coastal Ferry	20,904
Other Ferry & Coastal Services	11,623
Pilotage Authorities	2,973
Boating Safety, Search & Rescue	1,725
Canada Ports Corporation	875
ARFAA payments	421
Public Harbours & Ports	301
Strategic Capital Investment Initiatives	
- Harbours & Wharves	300
Marine Transportation Infrastructure	
- Northern Quebec	100
Total	166,996

Source: 1994-95 Main Estimates

- Initiation of a joint Canada-U.S. study on the feasibility of a cruise ship industry on the Great Lakes/St. Lawrence Seaway System.
- Amendment of the *Coasting Trade Act* to incorporate a 14-day waiting period before the issuance of a license to a foreign vessel.

The report was accompanied by a dissenting opinion by one of the Sub-Committee members, taking issue with several of the foregoing recommendations.

Agency Regulatory Activity

On February 27, 1993, the Atlantic Pilotage Authority published a proposal for an immediate seven per cent increase for all compulsory pilotage areas, to be followed by a subsequent eight per cent increase

Revenues/Recoveries on Federal Services to the Marine Industry (\$000)

TRANSPORT CANADA	
COAST GUARD	
Wharfage & Harbour Dues	11,667
Arctic Resupply	10,000
Ship Safety, Registration	2,662
Marine Radio Traffic	1,620
Other	1,244
Total	27,193

Source: 1994-95 Main Estimates

one year later. Objections to the proposal triggered an Agency investigation, which culminated in a decision issued on April 29, 1994. The Agency recommended that only certain ports receive the full seven per cent increase and that Halifax receive three per cent. All other rate increases were considered to be prejudicial to the public interest.

On October 8, 1994, the Laurentian Pilotage Authority announced new regulations, to come into effect January 1, 1996, to permit recovery of costs related to the management, invoicing and collection of its pilotage charges. No objections were filed with the Agency on this matter.

Subsequent to the Agency's 1993 ruling that the volume of salt diverted from Upper Lakes Shipping vessels to CN Rail for movement between Windsor, Ontario and Bécancour, Quebec was not sufficiently large to cause harm to the vessel owner, ULS and its co-applicants obtained leave to appeal the decision, and pursued the matter in the Federal Court. As of this writing, no decision has been rendered.

In April, 1994, the Bureau of Competition Policy declined to challenge the acquisition by Seaway Bulk Carriers (a partnership of Upper Lakes Shipping and Algoma Central Corporation) of 15 gearless bulkers vessels from Canada Steamship Lines Inc., Pioneer Shipping Limited, and Misener Holdings Limited. This transaction did not qualify for review by the Agency under the Mergers and

Acquisitions provisions in the *NTA, 1987*.

In October, it was reported that Genstar Capital Corporation and K&K Enterprises planned to acquire Seaspan International Ltd. the largest tug and barge operator on the west coast. The proposal is under review by the Bureau of Competition Policy.

In December, 1994, the Agency held a public hearing on the proposed acquisition of certain assets and shares of Cast Marine Holdings Ltd. by Canadian Pacific Limited. The Agency ruled that the acquisition was not contrary to the public interest, noting, in part, that

- Cast and Canmar should not be able to dominate or abuse market power due to effective

Marine Policy Issues Raised by Stakeholders

St. Lawrence Seaway	Despite some recovery in 1994, the Seaway is losing business and losing money. Its infrastructure is in need of major restoration and costs imposed on users by an inflexible toll system have seriously weakened its competitiveness.
Ports	In addition to the basic problem of excess port infrastructure, fragmented administrative arrangements and bureaucratic impediments have hindered the ability of ports to increase efficiency, improve financial performance, and compete effectively with U.S. ports.
Canadian Coast Guard	Facilities and services provided are an expensive burden on taxpayers, exceed user requirements, and produce minimal recovery of costs.
Pilotage	Compulsory pilotage services are part of the escalating costs faced by users of Canadian waterways. They recover a substantial portion of their costs but are not financially self-sufficient.
Domestic Carriers	There is growing concern over the appropriateness of cargo reservation under the <i>Coasting Trade Act</i> . Carriers face increasing costs and competition from both foreign vessels and surface modes; financial performance has been insufficient to fund necessary fleet renewal.
Foreign Carriers	Exemption of shipping conferences from competition laws and the access by foreign vessels to the coasting trade are ongoing concerns. Another issue is the high cost of using Canadian-flagged ships.
Ferry Services	Provision of ferry services and fleet renewal requirements are expensive and highly subsidized.
Cruise Industry	Availability of port facilities and restrictive gaming laws may offset Canada's legislative advantages over the U.S. in attracting and retaining this lucrative and rapidly-expanding industry.
Recreational Users	Debate centers around appropriate levels of service to be provided and user fees to be charged.
Marine Labour	Competitive pressures have produced increasing demands for improvements in labour productivity and loosening up of job security provisions. Labour disruptions have severe and lasting impacts on traffic over Canadian routes and gateways.
International Agreements	Canada's domestic environment must operate in harmony with its international trading agreements. This requires a competitive transportation rate structure, tax regime and regulatory environment.
Technology Introduction	Innovative use of technology is crucial to increasing productivity in broad-based applications such as Electronic Data Interchange (EDI) as well as specialized areas such as navigation using Global Positioning Systems.

competition on Canada/U.S.-North Europe trade;

- strengthening of Port of Montreal's competitive position relative to other Canadian and U.S. east coast ports will help to maintain and encourage economic growth;
- CN North America's direct rail access to Port of Montreal will not be obstructed by the transaction;
- combined Cast and Canmar operations will contribute to continued strong Canadian presence in U.S. mid-west market, which is important to maintain high levels of service to Canadian shippers; and
- barriers to entry that may exist will not be enhanced by a combined Cast and Canmar.

A subsequent application by Canadian National Railway Company in the Federal Court of Appeal for leave to appeal the Agency's decision was dismissed.

During the year, the Agency processed a total of 122 applications for licenses to operate foreign vessels in Canada's coasting trade. Of these, 27 were tanker operations, 23 involved passenger vessels, 33 were barges, 20 were tugs, six were cargo ships and the remaining 13 were a mixture ranging from a survey/seismic ship to remotely-operated vehicles.

Accessibility regulations on training requirements for employees of marine carriers and terminal operators under federal jurisdiction were implemented in January, 1994.

Table 7.1
Marine Bankruptcies in 1994

	Que.	Ont.	Alta.	B.C.	Canada
Freight & Passenger Transport	1				1
Ferry	2	1			3
Marine Towing	2		1	1	4
Ship Chartering	1				1
Marine Cargo Handling		2		1	3
Harbour & Port Operation	1				1
Marine Salvage		1			1
Other Marine-related		2			2
Total	7	6	1	2	16

Source: Office of the Superintendent of Financial Institutions Canada

Coasting Trade Licence Applications

Approved	81
Partially Approved	2
Denied	12
Lapsed	4
Withdrawn	23
Total	122

Source: National Transportation Agency

There were four complaints filed with the Agency during the year by licensed northern marine resupply operators on Lake Athabasca, i.e. Lake Athabasca Transport (LAT), MacDonald Marine, and A. Frame Contracting Ltd. Both LAT and A. Frame alleged that their competitors were operating in violation of the legislation (Part V, NTA, 1987) and LAT and MacDonald directed further complaints against the non-licensed operator, Girard Enterprises Ltd. None of the complaints was substantiated except in the latter case, where a cease and desist order was issued in September to Girard Enterprises. In November, Girard Enterprises Inc. applied for a license

to operate a scheduled resupply service between Shell Landing and Fort Chipewyan. Notice of the proposed service was published in February, 1995.

The Agency approved an amendment to the license of Cooper Barging Ltd., adding the point of Fort Good Hope. An application was filed by Lake Athabasca Transport for renewal of its licence to operate between Fort Chipewyan and points on Lake Athabasca and the Slave and Peace Rivers. The company has been operating with a two year licence (1993-94) issued in accordance with a Governor-in-Council order of December, 1992.

DOMESTIC SHIPPING

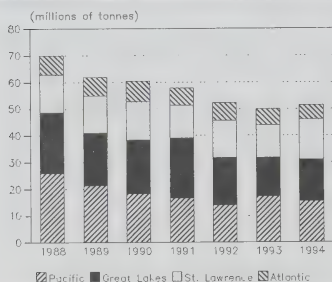
Canadian-based companies are the main suppliers of domestic marine transportation services. The domestic sector is differentiated into two geographical areas. Pacific west coast region and the Great Lakes, St. Lawrence and Atlantic sector.

Although the regional proportions remained largely unchanged, overall domestic tonnage had been dropping in recent years.

Domestic marine transport showed substantial gains in the Great Lakes and St. Lawrence regions.

This was resulting in excess capacity, softening rates and few vessel replacements in an aging fleet.

Figure 7.1
Domestic Marine Traffic
by Region of Origin



Source: Statistics Canada

Preliminary statistics for 1994 show an overall increase in domestic traffic based on substantial gains in the Great Lakes and St. Lawrence regions. Pacific region traffic declined after an exceptional year in 1993.

Pacific Region

The Pacific coast domestic marine transportation sector consists of a large and diverse fleet of vessels engaged in the barging and towing of cargoes on inland waterways, such as the Fraser River and Burrard Inlet, on coastal routes within the Gulf Islands, the Strait of Juan de Fuca,

and on ocean routes to Queen Charlotte Islands and Kitimat. Some companies are engaged in coastal services to California, Washington and Alaska. The timber and wood chips traffic is immense and critical to the coastal forest products industry.

The Council of Marine Carriers is a regional west coast association representing tug and barge operators. In 1994 full and associate memberships were held by 22 companies with an additional 14 companies as auxiliary members. Most members operate domestically, and some internationally between Canadian and U.S. ports.

Seaspan International Ltd. is by far the largest company in the domestic west coast market. It operates over 160 forest products barges for chips, hog fuel and sawdust, plus a variety of some 80 other special purpose barges and 45 tugs. About 20 per cent of Seaspan's operations are international, making it the only significant Canadian competitor for coastal trade with U.S. ports in Washington, California and Alaska.

In addition to its transportation concerns, Seaspan also provides ship assist operations in Burrard Inlet where it competes directly with the C.H. Cates & Sons tugging operation. The U.S. owner of C.H. Cates, K & K Enterprises, has agreed to purchase Seaspan International pending government approvals.

Rivtow Marine Ltd. is the second largest operator on the west coast with 43 tugs, 39 forest products speciality barges and a variety of 20 other special purpose barges.

Table 7.2
Council of
Marine Carriers, 1994

C.H. Cates & Sons Ltd.
Harken Towing Ltd.
Hodder Tugboat Co. Ltd.
Kingcome Navigation Co. Ltd.
Lafarge Concrete
Norsk Pacific Marine Services Ltd.
Northern Transportation Co. Ltd.
Pacific Towing Services Ltd.
Quatsino Navigation Co. Ltd.
Riverside Towing Ltd.
Rivtow Marine Ltd.
Seaspan International Ltd.
D.H. Timber Towing Ltd.
Valley Towing Ltd.
Weldwood Transportation Ltd.
Westminster Tug Boats Ltd.
Catherwood Towing Ltd.
North Arm Transportation Ltd.
Ocean Construction Supplies Ltd.
Shields Navigation Ltd.
West Coast Fuel Transport Ltd.
West Coast Tug & Barge Ltd.

Source: Council of Marine Carriers

Other smaller companies are Kingcome Navigation Ltd., involved in the transportation of logs and ro-ro railcar and trailer barges, and Ocean Construction Supplies Ltd. which handles aggregates. North Arm Transportation Ltd. and Shields Navigation Ltd. specialize in handling petroleum products. Together, these companies handle a significant proportion of the coastal marine traffic on the west coast. The other members have much smaller transportation interests or are involved in other marine activities.

It is estimated that 1994 domestic west coast traffic, including cargoes

Table 7.3
Domestic Tug and Barge Operations in British Columbia

	Ocean/ Coastal Towing	Inland Towing	Log Rafting & Ship Assist	Tugs	Barges	Special Equip.
Annacis Towing (1983)	*	*	*	*		
D & E Towing and Salvage	*		*	*	*	
Findlay Navigational		*	*	*	*	*
FMW Towing	*	*		*	*	
Gemini Marine Service	*		*	*	*	
Gray's Log Service	*		*	*	*	
Hodder Tugboat	*	*	*	*	*	
Horseshoe Bay Marine Services	*		*	*	*	
Inter Island Marine Transport		*	*	*	*	
Island-Sea Marine	*			*	*	
Island Towing		*		*	*	
Kingcome Navigation	*			*	*	*
Ladner Tug and Barge		*		*	*	
Larson Towing		*	*	*		
Noble Towing		*	*	*		*
Norsk Pacific Marine Services		*		*	*	*
Ocean Construction Supplies	*			*	*	
Rivtow Marine	*	*	*	*	*	*
Sealand Marine Freight	*			*	*	
Seaspan International	*		*	*	*	*
Shields Navigation	*		*	*	*	
Squamish Tugboat		*	*	*	*	

Source: Pacific Maritime Marine Services Directory, December 1994.

berged and towed, exceeded 30 million tonnes. Major commodities moved between coastal points are logs, chips, petroleum products, aggregates, industrial chemicals, newsprint, pulp, paper and general cargo. In spite of an upsurge in Pacific coast forest products traffic in 1993, volumes are declining overall, and consolidation of operations is increasingly important. Longer distances have enabled the fleet to maintain utilization rates. Price competition has maintained

fairly constant rate levels for several years.

Eastern Canada: The Great Lakes, St. Lawrence and Atlantic Regions

The Great Lakes, St. Lawrence and Atlantic domestic marine sector operates with a fleet of vessels meeting the maximum size and capacity limits of the Great Lakes/St. Lawrence Seaway System. Twelve companies, with a combined

fleet of 108 ships including seven vessels operating under foreign flags, are represented by the Canadian Shipowners' Association.

The St. Lawrence Ship Operators' Association, based in Quebec City, represents the interests of companies operating in the St. Lawrence River and Atlantic regions. In 1994 its 23 members included liquid and bulk cargo carriers, ferries, tug operators and service vessels.

Declining traffic during the last decade, especially grain, has caused drastic consolidation of the Great Lakes grain fleet.

In 1994 the assets of the three principal companies forming Great Lakes Bulk Carriers (Misener Holdings, Pioneer Shipping and Canada Steamship Lines), established in 1991, were purchased by the principal owners of Seaway Bulk Carriers (Algoma Central Corporation and Upper Lakes Shipping). The objective of the move was to increase operating efficiency in an industry with excess capacity and scrap some vessels to reduce the fleet to about 24 ships.

Seaway Bulk Carriers, established in 1990, now dominates the Lakes grain trade with 30 vessels, averaging 27 years of age, representing 75 per cent of the grain fleet. Only N.M. Paterson (seven ships) and P & H Shipping (two ships) are still operating independently, primarily in the grain trades. Seaway's

Table 7.4

Canadian Shipowners' Association: 1994 Fleet

Company	Bulk	Self-unloader	Tanker	Other	Foreign	Total
Algoma Central	12	11			1	24
CSL	1	11			3	15
Desgagnes	3		1	4		8
Enerchem			4		1	5
Imperial			4	2		6
Logistec/Nanuk				2		2
Oceanex				3		3
Paterson	7					7
P & H	2					2
Shell			1			1
Socanav			9		2	11
ULS	18	6				24
Total	43	28	19	11	7	108

Source: Canadian Shipowners' Association

Table 7.5

Canadian Shipowners' Association: Traffic Summary

	Tonnes (1994)	Tonnes (1993)
Import	20,372,088	20,880,730
Export	14,323,578	12,796,635
Domestic	33,078,862	32,252,902
Cross-trading	199,020	240,281
Total	67,973,548	66,170,548

Source: Canadian Shipowners' Association

acquisition of Great Lakes Bulk Carriers was approved by the Competition Bureau in April, 1994. This leaves Misener without any of its own tonnage, and Pioneer with one ship on long-term charter to Fednav Ltd. Canada Steamship Lines will continue to own and operate its self-unloading vessels in

domestic and international operations.

Modeled on Seaway Bulk Carriers, Seaway Self-Unloaders was established late in 1993 and began operations with the opening of the 1994 Seaway navigation season. Six self-unloading vessels owned by ULS and 11 owned by Algoma are

now operated by a management company to reduce empty movements and increase voyage tonnage.

All self-unloaders worked steadily throughout the 1994 season. Several grain vessels were recommissioned to meet increased demand. The additional traffic volume together with the fleet consolidations represented by Seaway Bulk Carriers and Seaway Self-Unloaders resulted in increased vessel productivity.

The Great Lakes/ St. Lawrence Seaway System

The St. Lawrence Seaway Authority (S.L.S.A.), a crown corporation, has the legislative mandate to administer, manage and operate the portions of the system under Canadian jurisdiction.

In its continuing effort to make the Seaway more efficient and competitive the maximum beam (width) of vessels transiting the locks was increased by 0.64 metres to 23.8 metres (by 2 feet to 78 feet). This will benefit 25 ships worldwide which will now be able to use the Seaway. Together with the 7.62 cm (3 inch) increase in draft announced late in 1993, this can add almost 1,000 tonnes of cargo-carrying capacity per voyage for some vessels. In September 1994 the maximum overall length of vessels using the system increased 3 metres to 225.5 metres (from 730 feet to 740 feet).

In July the U.S. St. Lawrence Seaway Development Corporation (S.L.S.D.C.) demonstrated the computerized vessel-tracking

applications of the Global Positioning System (G.P.S.), first developed by the U.S. Department of Defence. Plans are continuing for the Seaway to become the first inland waterway system in the world to use G.P.S. technology for vessel-tracking operations within the Seaway's channels starting in 1997. Experimental receivers and transmitters were installed on two vessels operated by Canada Steamship Lines.

Seaway Tolls

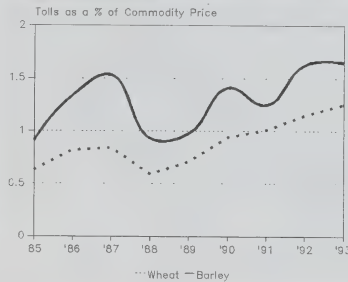
Although not strictly transportation rates, Seaway tolls add to the costs of cargo and vessels transiting the inland waterway. A vessel carrying an international cargo of steel slab to Chicago and returning with grain will incur about \$60,000 in Seaway tolls, plus pilotage and other fees.

The large fluctuations in the market price for commodities such as barley, and to a lesser extent, wheat, have had major impacts on the relative significance of Seaway tolls. The lower the commodity price, the more sensitive the commodity will be to Seaway tolls. Seaway tolls on a highly-priced commodity such as steel are considerably smaller as a percentage than for iron ore.

During 1994, international demand for coal, iron ore and steel has put upward pressure on prices. In spite of this, tolls have remained at 1993 levels and fallen as a proportion of commodity prices.

The U.S. harbor maintenance tax, an *ad valorem* tax levied at all U.S. ports, has affected the Seaway. Revenues are allocated to cover, among other costs, the U.S. costs associated with the management and

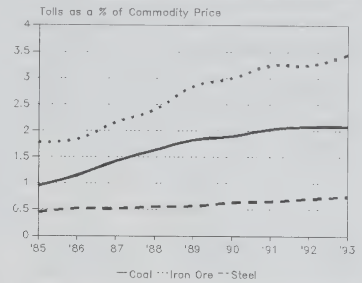
Figure 7.2
St. Lawrence Seaway Tolls as a Percentage of Commodity Price Levels



Source: TAF COMFIS

operation of the two locks on the Montreal-Lake Ontario section of the Seaway. Although the S.L.S.D.C. continued to collect its 25 per cent of the tolls levied since the harbor maintenance tax was instituted in 1988, these tolls were rebated immediately. On October 1, 1994, U.S. legislation came into

Figure 7.3
St. Lawrence Seaway Tolls as a Percentage of Commodity Price Levels



Source: TAF COMFIS

effect ending the collection of U.S. Seaway tolls completely.

The elimination of U.S. tolls on the system and the 1994 U.S. call for a ten per cent reduction of the Canadian tolls were in direct opposition to the Canadian Authority's plan to continue increasing tolls, and caused tension

Table 7.6
St. Lawrence Seaway: 1994 Tolls

	Welland (\$Cdn)	MLO (\$Cdn)
Vessel Charge Based on Gross Registered Tonnage	0.13	0.11
Tonnage Charge by Cargo Type:		
Bulk Cargo	0.55	1.10
Steel Slab	0.63	2.41
General Cargo	0.88	2.66
Containerized Cargo	0.55	1.10
Food Grains	0.55	0.68
Feed Grains	0.55	0.68
Welland Canal Charge		
loaded: per lock	440	n/a
ballast: per lock	325	n/a

Source: St. Lawrence Seaway Authority

Table 7.7

Features of the Seaway Incentive Tolls Program

Improved Competitiveness	- Reductions on steel slab of \$0.50 to meet Mississippi price.
Market Development/New Business	- 50% reductions for new business throughout the season; - reductions on new outbound coal traffic of \$0.45 per tonne (41%); - 49% reduction on recycled materials.
Market Penetration	- 50% reduction for high volume shippers on traffic exceeding 25,000 tonnes on three-year average.

Source: St. Lawrence Seaway Authority

between the two national entities during the year. A deadlock in the negotiation of modifications to the Tariff of Tolls resulted in the continuation of the 1994 tariff for the 1995 navigation season — the second year in a row that tolls have been frozen at 1993 levels.

Table 7.8

Selected Comparisons of 1993 and 1994 St. Lawrence Seaway Traffic

	<u>Montreal-Lake Ontario</u>			<u>Welland Canal</u>		
	1994	1993	% Change	1994	1993	% Change
	<i>thousands of tonnes</i>			<i>thousands of tonnes</i>		
Total - All Types	38,403	31,970	20.1	39,711	31,815	24.8
Canadian Grain	8,001	6,302	27.0	8,124	6,518	24.6
U.S. Grain	5,227	4,532	15.3	5,460	4,672	16.9
Iron Ore	11,046	9,963	10.9	7,346	5,025	46.2
Coal	535	242	121.1	3,641	3,472	4.9
Other Bulk	6,520	6,464	0.9	9,673	8,754	10.5
Iron and Steel	4,736	2,179	117.3	3,893	1,772	119.7
Steel Slab	2,023	1,957	3.4	1,345	1,347	-0.1
	<i>thousands of GRTs</i>			<i>thousands of GRTs</i>		
Vessel Tonnage	37,741	30,038	25.6	42,859	36,063	18.8

Source: St. Lawrence Seaway Authority

It is estimated that by the year 2000, the modern world fleet capable of transiting the Seaway will be only 42 vessels.

The St. Lawrence Seaway Authority is continuing to pursue ways to reverse the rapid rate of Seaway-size vessel retirements. S.L.S.A. withdrew its support of the popular New Buildings Incentive Program for lack of direct benefit to Canadian shipowners and possible conflict with the recent O.E.C.D. agreement to end state-sponsored shipbuilding subsidies. It is also seeking government agreement to set market-sensitive pricing strategies that would permit the negotiation of confidential contacts as in other modes.

Competition

Seaway traffic has been negatively affected by institutional changes such as the decision of Ontario Hydro to drastically reduce its dependence on coal for the generation of electrical power, by the *Western Grain Transportation Act* and global shifts in grain markets which favor west coast ports and by the rationalization of the U.S. steel industry.

On the other hand, a change in policy permitting U.S. aid grain to be carried in foreign-flagged vessels through the Seaway for transshipment to U.S.-flagged vessels at St. Lawrence River ports has directly benefited the Seaway. Other new business has arisen from opportunities to ship coal from

Pennsylvania and Colorado through the Seaway to Canadian and European destinations.

There are, however, considerable difficulties with the different approaches to Seaway management taken by U.S. and Canadian authorities: the U.S. subsidizes its costs indirectly through the harbour maintenance tax, whereas Canada legislates the recovery of costs through a system of tolls and leans increasingly toward the concept of "user-pay".

The Canadian approach to levying tolls presents a burdensome competitive liability in an environment where U.S. inland waterways do not charge user fees.

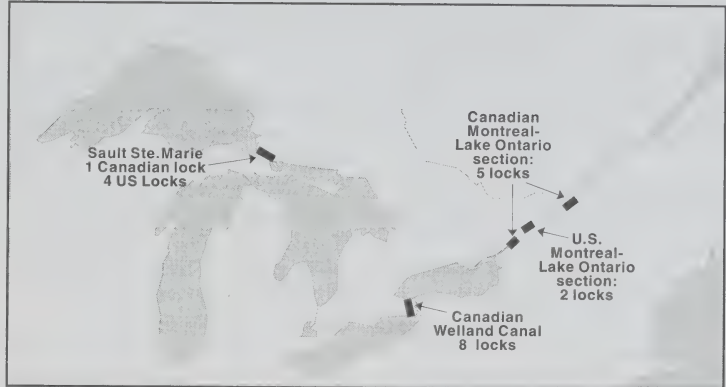
Canada is responsible for all eight locks on the Welland Canal and five of the seven on the Montreal-Lake Ontario Section. The U.S. is responsible for two locks on the Montreal-Lake Ontario Section, thereby facing significantly lower costs. However, the U.S. also operates the Poe Locks at Sault Ste. Marie and Canadian cargoes pass through this facility free of charge. In spite of U.S. claims that the toll levels are excessive, U.S. cargo is increasing in the system.

Seaway Traffic Levels

Traffic growth in 1994 arose from overall improvement in the U.S. and Canadian economies and, in

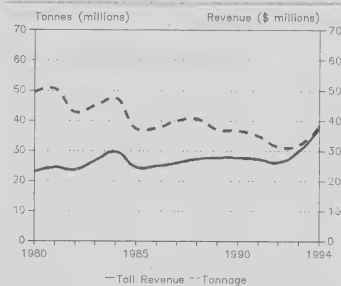
Figure 7.4

Great Lakes/St. Lawrence Seaway System: Jurisdiction of Binational Waterway

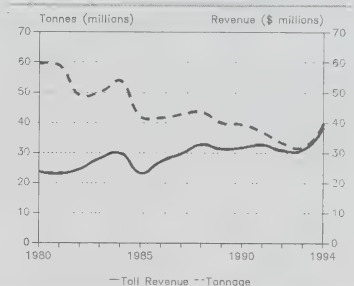


Canadian Toll Revenue and Cargo Tonnage

Montreal - Lake Ontario Section

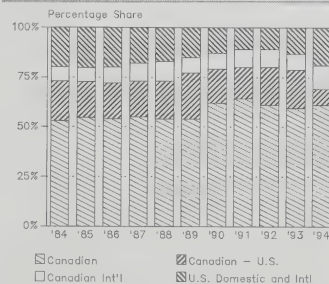


Welland Canal Section

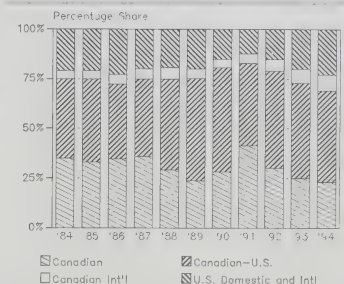


Canadian and U.S. Seaway Traffic

Montreal - Lake Ontario Section



Welland Canal Section



Source: St. Lawrence Seaway Authority

particular, from good grain harvests. Iron ore and steel led the increases, accounting for over 56 per cent of the improvement while grain accounted for an additional 33 per cent. Almost all commodities increased, with a few registering slight declines.

Equally significant is the nature of the vessel traffic transiting the system. Lakers represented a smaller proportion of the transits as ocean vessels increased their use of the Welland Canal and the Montreal-Lake Ontario sections of the Seaway. Total vessels transits were up by 15 per cent to 3,378 transits in 1994 on the Welland Canal and 24 per cent

to 2,857 on the MLO section. Upbound ocean vessels transits increased by over 40 per cent in 1994; two-thirds of these were destined to U.S. points.

Financial Performance

St. Lawrence Seaway Authority reported an operating loss of \$6.1 million on total revenues of \$69 million for the fiscal year ending March 31, 1994. Toll revenue reached \$57.5 million, including \$1.7 million in rebates paid under the Incentives Toll Program. This marked an increase of \$3 million in revenues over the previous year when S.L.S.A. incurred losses of \$11 million.

At fiscal year end in March 1994 the Capital Fund Reserve stood at \$14.8 million, although the expected capital expenditures for the major restorations required to keep the Seaway free from failure is expected to deplete this reserve quickly. Funding requirements for high priority maintenance are estimated at \$45 million.

Revenues were up during 1994 to \$76 million, before payments due under the Incentive Tolls Program.

INTERNATIONAL MARINE TRADE

In 1994 the value of marine export and import trades reached \$34.7 billion and \$34.9 billion respectively, which exceed 1993 levels by 14 per cent for both exports and imports.

Marine exports to the U.S. represent 14 per cent of the value of total exports, and five per cent of imports. Although the overall value of marine trade is low compared to motor and rail carrier trade with the U.S., it is substantial in terms of tonnes. Traffic to the U.S. increased by about 18 per cent in 1994 to almost 50 million tonnes. This represents 47 per cent, or almost half of total marine export volumes. Imports by marine from the U.S. increased by 7.5 per cent in 1994 to over 30 million tonnes. Marine imports from the U.S. represent 38 per cent of total marine imports to Canada.

In 1994, trade with Mexico by marine transport reached three million tonnes of cargo valued at almost \$0.5 billion. Exports represented 70 per cent of this cargo

Table 7.9
Vessel Transits Through the St. Lawrence Seaway

Vessel Type	1994			% Change from 1993		
	Total Transits	Up-bound	Down-bound	Total Transits	Up-bound	Down-bound
<i>Montreal - Lake Ontario Section</i>						
Lakers - Total	1,581	786	795	13	13	13
Loaded	1,102	568	534	7	8	5
Ballast	479	218	261	29	27	31
Ocean - Total	1,276	637	639	42	41	42
Loaded	1,069	602	467	38	42	33
Ballast	207	35	172	64	35	72
<i>Welland Canal</i>						
Lakers - Total	2,333	1,170	1,163	6	7	5
Loaded	1,496	597	899	13	22	7
Ballast	837	573	264	-4	-6	—
Ocean - Total	1,045	523	522	43	43	43
Loaded	868	447	421	47	51	43
Ballast	177	76	101	29	12	46

Source: St. Lawrence Seaway Authority

volume but over 90 per cent in terms of its value.

Table 7.10

Flag of Vessel for Marine Imports and Exports, 1993

	Million of Tonnes
Transborder Traffic	
Canada	39.5
U.S.	4.2
Other	26.0
Overseas Traffic	
Liberia	23.9
Panama	16.9
Norway	12.5
Bahamas	12.3
Greece	10.9
Japan	10.0
Cyprus	9.5
Philippines	6.2
Hong Kong	6.0
South Korea	5.2
Other	40.9
Total International Marine Traffic	224.0

Source: Statistics Canada

Trade in 1994 involving overseas marine transport services beyond North America amounted to over 165 million tonnes of cargo valued at more than \$60 billion.

Information available for 1993 indicates that Canadian-flagged ships handled 57 per cent of transborder traffic between U.S. and Canada, representing 18 per cent of Canada's international marine traffic. The vast majority of this traffic is carried by members of the Canadian Shipowners' Association. In 1993 their members carried 83 per cent of imports from the U.S. and 38 per cent of exports to the U.S. It

is estimated that Canadian carriers handled one-half of the transborder trade on the Pacific coast.

International Shipping Companies Based in Canada

The international, deep-sea marine transport industry operates worldwide. Vessels represent major assets, while shore-based assets in terminals and offices are comparatively minimal. Liner companies maintaining large terminal facilities are the exception.

Shipping companies are highly mobile, and asset management strategies respond to shifting global markets and competitive opportunities.

Canadian-based companies are active in many aspects of international shipping: ship owning, management, financing, acquisition, chartering and brokering, agency services, chandlery, freight forwarding and marine law, insurance and safety. They tend to register their ships abroad to avoid financial and tax-related burdens that make Canadian company and vessel registration more costly.

Fednav Ltd., by far Canada's largest ship owning and chartering company, celebrated its 50th anniversary in 1994. Based in Montreal, its two dozen subsidiaries and associated companies worldwide

carried a record 28 million tonnes of cargo on some 60 vessels in 1993, generating \$1 billion. The group's activities include shipowning and chartering, bulk freight operations, liner services, marine terminals and stevedoring, ship agency, Arctic transportation, offshore supply and support services.

In April, Fednav announced an order of four vessel replacements for its fleet of 13 purpose-built bulk carriers. These ships are unique in their design and will be built in China for delivery in 1996. The ice-strengthened, ocean-going vessels of 34,000 dwt will be slightly short of the Seaway maximum and light at 21,850 cargo tonnes in order to provide maximum flexibility in international handysize markets. At a total cost of more than \$100 million, these vessels are the first Seaway size vessels to be built since 1985. Two Korean-built 44,000 dwt ice-strengthened bulkers for use in Arctic mineral concentrate trades are to be delivered in 1995.

Socanav, also based in Montreal, is a shipping company specializing in the marine transportation of bulk liquids, mostly petroleum and chemicals. Half of its vessels handle local needs for the Imperial and Shell Oil companies; the remaining activities are international tanker operations. Year-end results at 31 July 1994 reported net earnings \$0.7 million on \$43.8 million revenue, a \$2.9 million improvement over the previous year. First quarter results (August-October 1994) showed profits of \$522,000 on sales of \$14.2 million.

Canadian forest products industries have substantial international shipping interests. Canadian Transport

Table 7.11

Expansion of International Shipping Activities Based in Canada Arising from the International Maritime Centre Initiatives

Company	Interests	Operations and Activities
Teekay Shipping	Bahamian/U.S.	about 50 tankers
Canada Transport Co.	Canadian	forest products carriers
Golden Ocean	Taiwan/Japan/U.K.	container, bulk, tanker operations
Kent Line	Canadian	tanker, liner and barge operations
Oak Maritime Canada Inc.	Hong Kong	15 bulk carriers
Fairmont Shipping Canada Ltd.	Hong Kong/Philippines	5 bulk carriers
Valles Steamship	Hong Kong	9 bulk carriers
Manhattan Shipping	n/a	ship operations
Expedo	n/a	tanker operations

Note: Partial list; includes most major relocations/expansions.

Source: International Maritime Centre - Vancouver, National Transportation Agency.

Co., based in Vancouver, is fully owned by MacMillan Bloedel, providing vessels for the export of forest products. Vessels owned by Abitibi-Price are managed, under contract, by Montreal Shipping. The Irving Group has ro-ro vessels and barges for use in the forest products sector as well as liner vessels for Atlantic seaboard operations. There are a number of other forest products carriers based in Canada with offshore ownership. They include Pacific Commerce Line, Seaboard Pacific Line, Saga Forest Products International (Canada) Inc. All are based in Vancouver.

In addition, there are some smaller Canadian-based companies engaged in international shipping from Canada, some as owners and others as charterers or vessel managers. Companies with long-time liner shipping interests based in Canada are Canadian Pacific Ltd., Cast North America, and Kent Line.

In spite of Canadian involvement in international shipping, it was apparent that the taxation environment was discouraging the relocation of international shipping operations to Canada.

Canadian initiatives have succeeded in attracting more international shipping companies.

In 1991, the Asia Pacific Initiative, a trade promotion organization funded jointly by the federal and provincial governments, succeeded with proposed amendments to the *Income Tax Act*, clarifying that foreign-registered companies operating international shipping concerns would not be taxed in Canada on profits earned worldwide.

The International Maritime Centre - Vancouver was established in 1992 to market new opportunities for

international shipping operators in Canada arising from the amended *Income Tax Act*. It estimates that at least 20 companies have taken advantage of the changes, creating between 200 and 250 new jobs. About half of the companies are Canadian-based operations expanding into areas that were effectively closed to Canadian interests prior to the changes. The remaining half are foreign companies relocating in whole or in part.

Canada's International Marine Traffic

Preliminary Statistics Canada tabulations for 1994 indicate that Canada's international marine traffic increased by more than 20 million tonnes over 1993 to about 247 million tonnes. Exports increased by 11 per cent to 169 million tonnes and imports by eight per cent to 78 million tonnes.

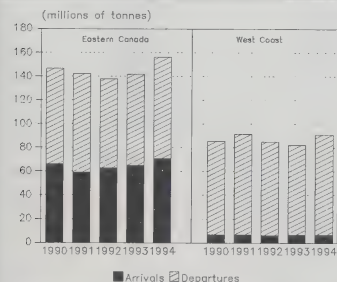
Traditionally, west coast ports are mainly engaged in export activities while eastern Canadian ports have an overall balance of imports and exports, and this was reflected in the 1994 data. Exports increased at both west coast and eastern Canadian ports; however, almost all of the increases in imports occurred via eastern Canada.

These data do not include Canadian cargoes routed through U.S. ports but do include U.S. cargoes routed through Canadian ports.

Canada-U.S. Marine Traffic

In 1994 total marine traffic with the U.S. reached over 79 million tonnes, an increase of 15 per cent. Exports to the U.S. increased more than imports from the U.S. The main commodities in transborder trade remain unchanged in 1994, including petroleum products, aggregates, iron ore, forest products (primarily exported) and coal (primarily imported).

Figure 7.5
Canadian International Marine Traffic
1990 - 1993



Source: TAF COMFIS, Statistics Canada

Marine Traffic with Mexico

In 1990 exports and imports were equal in terms of tonnage, amounting to less than one million tonnes. In 1994 traffic had reached three million tonnes, with exports at 70 per

cent of the total. More than 80 per cent of the exports and half of the imports were loaded/unloaded at Canadian west coast ports. The overall proportion of Mexican traffic handled via west coast ports increased from 70 per cent in 1993 to over 75 per cent in 1994. Wheat, canola, and coal remained the largest export commodities while gypsum, salt and crude petroleum were the main imports.

Canada's offshore marine traffic approached a 10-year high in 1994.

International Overseas Traffic

Preliminary Statistics Canada tabulations for 1994 show a significant increase in international overseas traffic. Exports were up by nine million tonnes, including increases of almost five million tonnes to Western Europe and more than four million tonnes to Asia. There were smaller increases in exports to Oceania, South America and Middle East/North Africa and a half million tonne decrease in shipments to Africa. Exports to the Former Soviet Union and Eastern Europe maintained 1993 levels. The largest proportion of increased export traffic was handled through western Canadian ports.

Offshore imports increased by three million tonnes in 1994 to 46 million tonnes. This was the result of a 4.5 million tonne increase in imports from Western Europe through eastern Canadian ports combined with marginal increases in shipments from Eastern Europe and South America, and decreases of about two

million tonnes in import trade with other regions.

Bulk Markets and Rates

Bulk freight rates are set in the open market, which is global and intensely competitive.

Time charters can cover longer periods of time, five years for example, enabling shippers to secure regular and predictable transportation rates during the period of the contract. Contracts covering one year are not uncommon when prices are volatile. Details of the arrangements are usually strictly confidential. Most Canadian exports and imports fall under such arrangements.

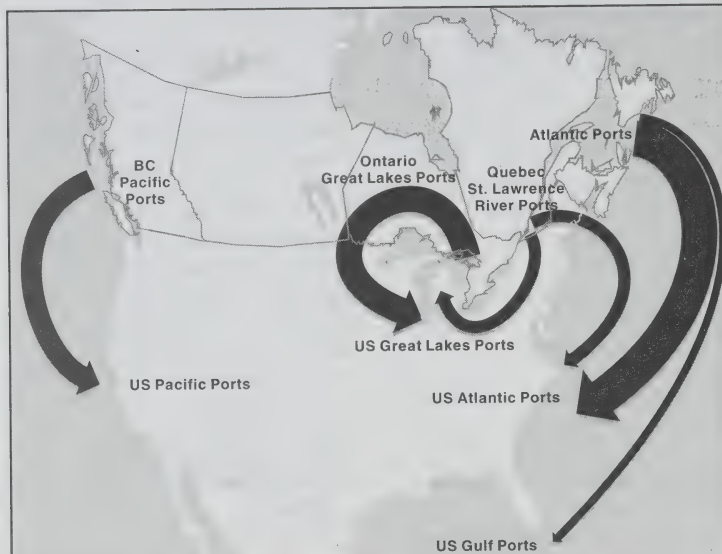
The spot or tramp market is made up of short-term contracts covering a certain number of voyages, days or a given quantity of cargo. Spot prices are set in open markets and exchanges. Price levels depend on supply and demand factors that include vessel size, equipment, trade route and timeliness of the service requirements.

International Marine Pricing

The international rate levels fixed in open markets were uneventful during the first half of 1994, following normal cycles. After a sharp decline in May, rates began to rise for the largest vessels in July and continued through to the end of the year and into 1995. By year's end, increases had occurred for all sizes of vessels.

The tightening of vessel supply and demand is attributed to increased demands for coal and iron ore at steel mills as major economies pulled out

Figure 7.6
Major Marine Exports to U.S. by Canadian Region of Origin - 1993



Source: TAF COMFIS, Statistics Canada

of the recession. This, in turn, stimulated demand for capesize vessels (over 80,000 dwt), which are too large to make use of the Panama Canal. These vessels were required to meet prompt delivery needs for iron ore and coal and seasonal needs of U.S. grain in trans-Atlantic and trans-Pacific trades. Capesize vessels thus saw the largest increases.

In 1994, the SS&Y Atlantic Capesize Index, which is a measure of rate levels for large bulk ships, registered a 70 per cent increase. Reported fixtures for single voyages for Canadian east coast iron ore and west coast coal shipments reflected increases of this magnitude, indicating that these increases have been passed on to Canadian shippers.

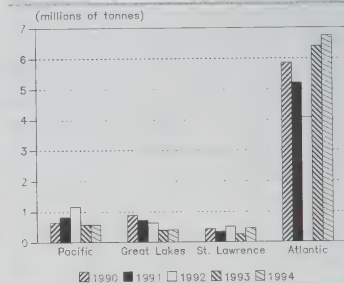
Spot prices for U.S. grain deliveries on Panamax vessels (50,000 to

80,000 dwt) have also increased dramatically. Earnings for Panamax vessels plying the grain trade reportedly reached their highest levels since 1980, albeit driven by competing demands for the vessels to move coal. Fixtures reported for Canadian grain indicated increases for handysize and handymax vessels on the spot market but to a much lesser extent, as these rates had already recovered somewhat in 1993.

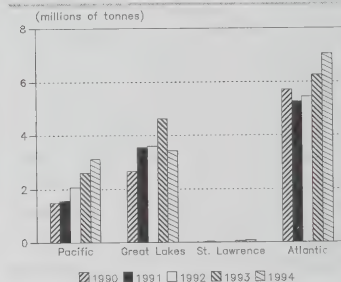
Overall indices indicate rates for dry bulk cargoes have passed the 1991 peak levels associated with the Gulf War.

Crude petroleum carriers reported firmer prices although not at former peak levels. Some of the increase has been attributable to a rise in bunker fuel prices and responses to

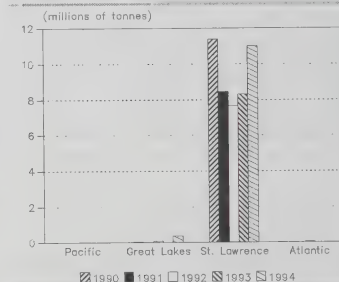
Petroleum Products



Aggregates



Iron Ores



Forest Products

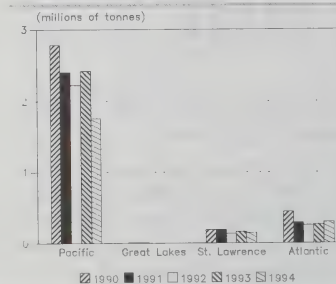
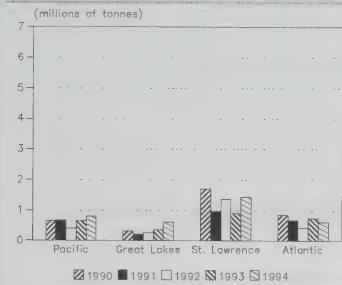
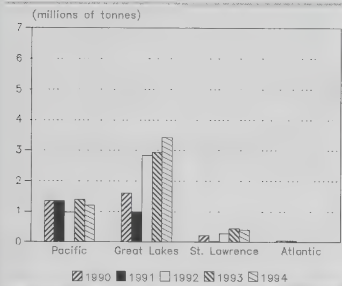


Figure 7.7
Major Marine Imports from U.S. by Canadian Region of Destination - 1993

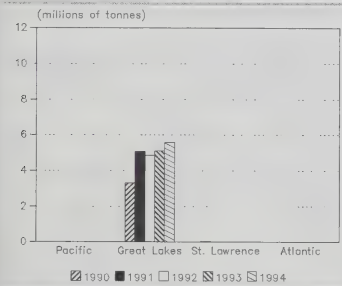
Petroleum Products



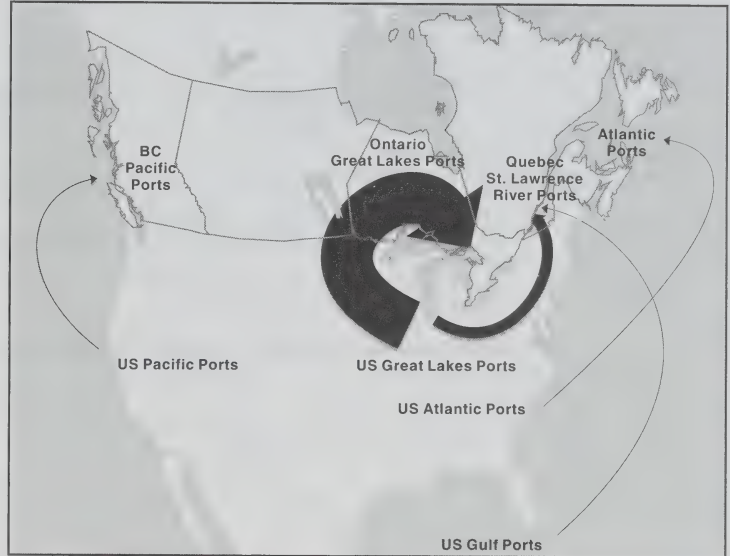
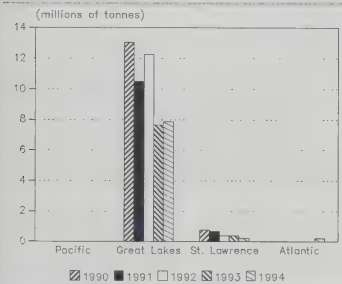
Aggregates



Iron Ores



Coal



Source: TAF COMFIS, Statistics Canada

reports of Iraqi military build-up along its border with Kuwait.

Impact on Capacity

As prices began to increase, some charterers fixed into longer terms. Prices of second hand vessels followed freight rates up; vessel retirements slowed as a result. This was evident in decisions taken by operators on the Great Lakes to delay scrapping of older grain vessels while they continued to deliver cargo.

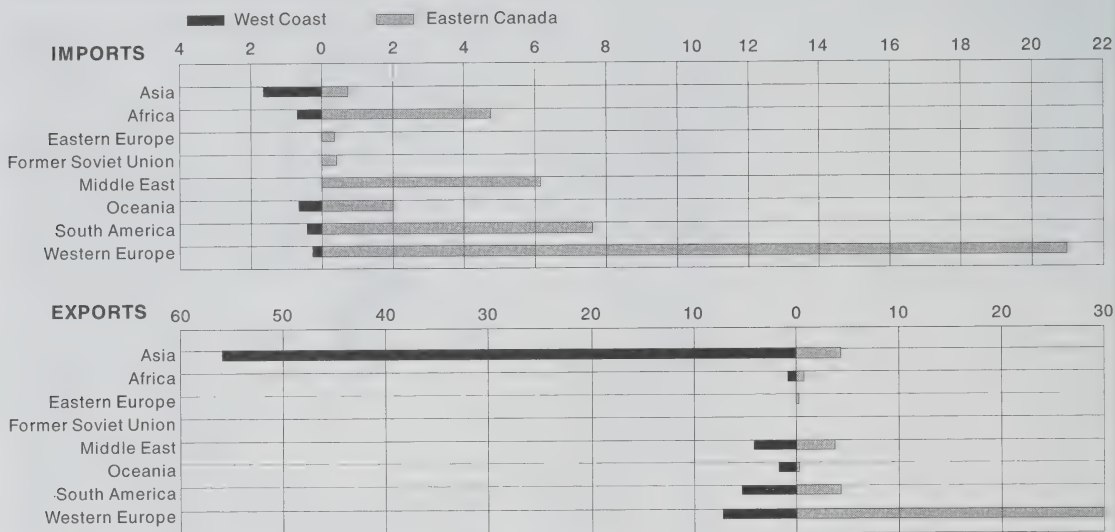
Over half of the world's bulk fleet is over 15 years old, compared to 16 per cent a decade ago according to *Lloyd's Shipping Economist* (January 1995). This aging process has been tempered by the influence of shipbuilding subsidies available in various forms.

In 1994, O.E.C.D. members agreed to discontinue state-sponsored ship-building subsidies after a period of adjustment, although this agreement is not expected to have any early effects.

New buildings continue to focus on handymax size vessels. The current fleet overcapacity will be exacerbated as newly built vessels are delivered and scrapping delayed.

These actions will continue to benefit shippers, including Canadian importers and purchasers of Canadian exports.

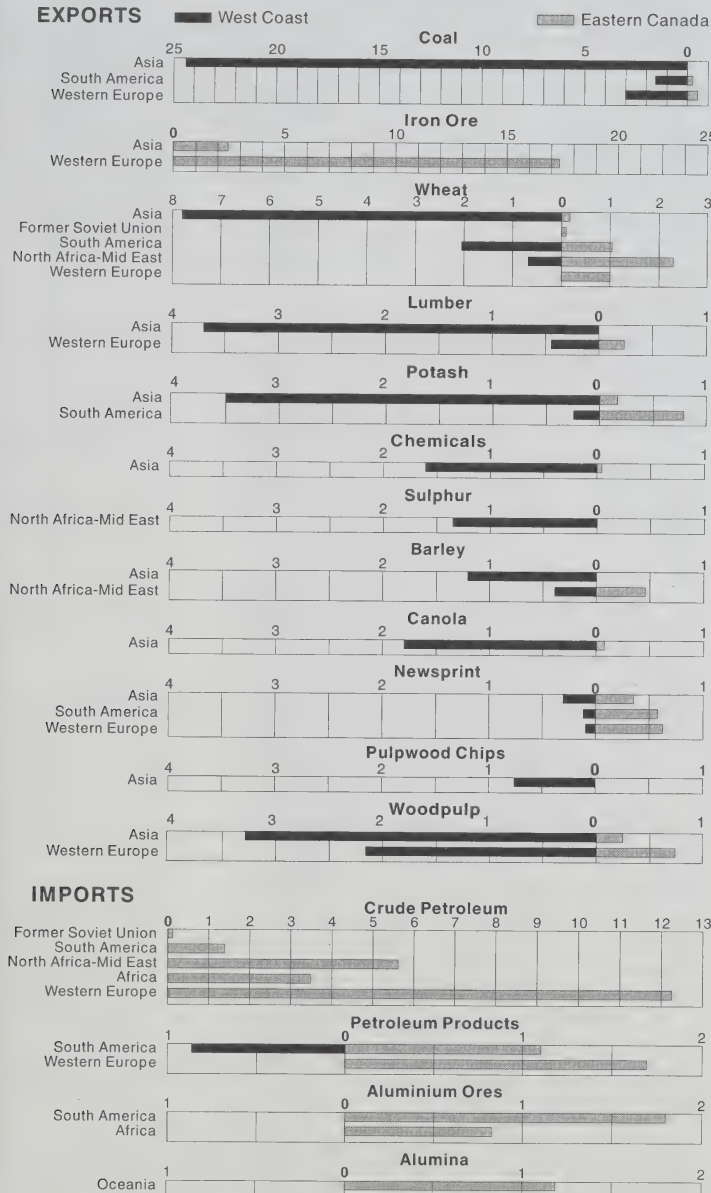
Figure 7.8

International Marine Traffic by World Region -1994 (millions of tonnes)

Source: TAF COMFIS, Statistics Canada

Figure 7.9

Major Marine Commodity Movements by World Region - 1994 (millions of tonnes)



Source: TAF COMFIS, Statistics Canada

INTERNATIONAL LINER SHIPPING

Structure

Shipping lines calling at Canadian ports provide liner and non-liner services. Liner services are offered according to published schedules and on specific trade routes. Liner carriers generally handle containerized and/or breakbulk cargoes which are traditionally of higher value, such as electronic equipment, frozen foods or manufactured goods. Conversely, non-liner carriers do not operate on fixed schedules and serve any shipping lane. Their services are secured through voyage contracts or time-charters. Non-liner carriers are usually specialized in the carriage of specific commodities, usually lower-value items subject to world market demand, such as forest products, crude oil or grain.

In order to ensure a certain stability and reliability of available liner services, Canada has enacted the *Shipping Conferences Exemption Act, 1987 (SCEA)*, modeled after the *U.S. Shipping Act of 1984*. SCEA grants immunity from the *Competition Act* to shipping lines wishing to provide liner services as a group or "shipping conference". The Act allows shipping conferences to collectively set ocean freight rates and services which must be published in a tariff filed with the Agency. Also, in order to promote intra-conference competition and to provide shippers with additional pricing options, SCEA incorporates provisions for independent action and confidential service contracts. Shipping lines who do not operate within the confines of a shipping conference are referred to as

"independents" or "non-conference operators"; they also provide liner services but are not required to file a tariff.

Twenty-five tariff-filing shipping conferences served Canada in 1994, an increase of one from 1993. The Mediterranean-Canadian Freight Conference, an inbound/outbound conference serving the Canadian east coast, filed its tariff with the Agency in July and started operations in October, 1994. Fourteen conferences provided services from the east coast and nine from the west coast; two conferences also served both coasts.

***Cooperative
agreements among
former competitors are
prevalent on all major
trade routes.***

In recent years, overcapacity and depressed freight rates have forced more cooperation between major shipping lines, both conference and non-conference, in the form of joint service arrangements, slot-chartering and vessel-sharing agreements. The Transpacific Stabilization Agreement (TSA) and the Trans Atlantic Agreement (TAA) embody such cooperation. This year also saw the emergence of plans for new global alliances between lines operating on the world's busiest trade lanes — between Europe and Asia, and between Asia and North America.

Services

Number of Lines

Since the end of 1989, there has been little change in the total number of

Table 7.12
World's Top 20 Container Lines

	Total Fleet		On Order	
	Vessels	TEUs	Vessels	TEUs
Maersk Line	92	176,614	10	46,000
COSCO	130	160,000	6	13,005
Evergreen Marine Corp.	51	145,425	10	41,416
NYK Line	68	129,044	3	14,400
Sea-Land Service	85	100,000	5	20,000
"K" Line	45	98,353	0	—
P&O Containers	36	95,200	1	4,038
Nedlloyd Lines	61	92,300	0	—
Hanjin Shipping Co.	36	87,466	2	8,048
Mediterranean Shipping	65	83,393	2	6,600
Mitsui O.S.K. Lines	44	80,241	4	19,400
Yangming Marine	26	68,764	5	17,500
Zim Container Line	49	66,982	5	17,165
Hapag-Lloyd	17	62,611	1	4,422
Neptune Orient Lines	32	61,548	6	26,302
OOCL	24	57,403	6	29,316
Senator Line	23	54,700	0	—
American President Lines	14	48,940	9	39,600
Hyundai Merchant Marine	16	48,800	5	25,230
Cho Yang Line	24	41,558	0	—

Source: The Journal of Commerce (PIERS)

direct liner services to Canadian ports. However, on the east coast, the number of conference lines declined from 25 in 1989 to 20 in 1994, while non-conference operators' numbers went from 28 to 37. On the west coast, non-conference services are now predominant as conference lines calling west coast ports decreased significantly from 23 in 1989 to only 13 in the fall of 1994, while non-conference operators increased from 14 to 21 over the last five years.

North Atlantic and Mediterranean

Many adjustments occurred on the routes between North America and

Europe during 1994. Canada Maritime and OOCL added a third service loop connecting northern Europe and Montreal. The capacity offered on the Mediterranean service has also been upgraded with the introduction of larger, faster vessels. This should continue into the future, as both lines have vessels of approximately 2,200 TEU on order for this trade route.

On its North Atlantic service, CAST moved to the use of pure containerships from conbulkers during the latter half of 1994; this has resulted in greatly improved transit times. A new conbulker service, Orion Maritime, now

operates between Antwerp and Montreal, chartering the former CAST vessels.

The Pacific Atlantic Express (PAX) service offered jointly by Neptune Orient Lines (NOL), NYK Line and Hapag-Lloyd now calls at Halifax

twice weekly both east- and westbound. Atlantic Canada was formerly served via New York. Maersk upgraded its service calling Halifax from the Mediterranean, the Middle East and Africa to bi-weekly.

In other developments, Lykes has added a new service from Boston to northern Europe to its already existing Mediterranean service out of New York, and the new MEDCAN conference has given shippers another choice of service to the Mediterranean.

Table 7.13

Independent Lines Serving Canada

West Coast		East Coast	
Line Name	Trade Routes	Line Name	Trade Routes
COSCO	S.E. Asia, N.E. Asia	ABC Container Line	S.E./N.E. Asia, Europe, Oceania
Evergreen Line	S.E. Asia, N.E. Asia, Middle East	Nt'l Shipping Co. of S. Arabia	S.E. Asia, N.E. Asia
FESCO	S.E. Asia, N.E. Asia, Subcontinent	Hoegh Line	S.E./N.E. Asia, Europe, Mid-East
Hoegh line	S.E. Asia, N.E. Asia, Europe	Zim Israel Navigation	S.E./N.E. Asia, Mid-East, Oceania, South/Central America, Caribbean
Pacific Commerce Line	S.E. Asia, N.E. Asia		S.E. Asia, N.E. Asia
Noram Ocean transport	S.E. Asia, N.E. Asia	Pacific Commerce Line	S.E. Asia, N.E. Asia, Mediterranean
Hyundai Merchant Marine	S.E. Asia, N.E. Asia	Star Shipping	Subcontinent
Westwood Shipping	S.E. Asia, N.E. Asia, Europe	Shipping Corp. of India	Europe, Mediterranean, S. America
CMB Belgian Line	Europe	Maersk Line	Europe
Cascadia Container Line	Europe	Arctic Steamships	Europe
OOCL	Europe	Balt Canada	Europe
Maersk Line	Europe	FinnCarriers	Finland
Atlantic Container Line	Europe	Greenland Lines	Greenland
Hapag Lloyd	Europe	Kent Line	Europe, Mediterranean
Sea-Land	Europe	Ocean Star Shipping	Europe, South America
BHP-IMTL Line	Oceania	Cie Nationale Alger. de Navig.	Africa
Italian Line/Lloyd Triestino	S.E. Asia, N.E. Asia	Iceland Steamships (Eimskip)	Iceland
Wilhems Lines	Oceania	Nt'l Shipping Corp. of Pakistan	Middle-East
Refrigerated Container Carriers	Oceania	Sea-Land	Europe, Mediterranean
Nedlloyd Line	Oceania	Troll Carriers	Europe
CVS Chilean/Granco JS	South America	Jadroplov	Europe, Mediterranean
CCNI Line	South America	Lykes Lines	Mediterranean, Central America, Caribbean, Africa
Grancolombiana Line	South America		Middle East
Navicana Line	Central/South America	Evergreen	Europe
Naviera Lavinel	South America	Turkish Cargo Lines	Europe, Oceania
Naviero Pacifico	South America	Wilhems Lines	Oceania
Pacific Meridian Line	Central/South America	Neptune Orient Lines	Central/South America
Safbank Line	Africa	Grancolombiana Line	Central/South America, Caribbean
American President Lines	Subcontinent	Saguenay Shipping	Cuba
Mitsui-OSK Line	Subcontinent	Mambisas Cuflet Line	Cuba
White Pass Transportation	Alaska (U.S.)	Melfi Line	Caribbean/Central America
West Coast Barging-Foss	Shuttle service - U.S. ports	Netumar Line	Africa
Matson Navigation	Shuttle service - U.S. ports	Safbank Line	Africa
		Barber West Africa	Africa
		Christensen Cdn African Lines	Africa
		Naviera Lavinel	South America
		Mediterranean Great Lakes Line	Mediterranean
		Falline (FEDNAV)	Europe
		Orion Maritime	Europe
		Coral Line	Brazil

Source: National Transportation Agency

Table 7.14
Shipping Conferences Serving Canada Via West Coast Ports

Conference	Scope of Operations	Member Lines	Port of Call
Canada Westbound Rate Agreement Asia North America Eastbound Rate Agreement	Both conferences serve the Commonwealth of Independent States, Hong Kong, Indonesia, Korea, Malaysia, People's Republic of China, Philippines, Singapore, Taiwan, Thailand, Japan (CWRA only), and outports to Brunei, Kampuchea, Laos, Vietnam	American President Lines Maersk Line "K" Line Mitsui OSK Lines Neptune Orient Lines N.Y.K. Line OOCL Sea-Land	U.S. ports Vancouver/U.S. ports Vancouver Vancouver Vancouver Vancouver Vancouver U.S. ports
Japan-West Canada Freight Conference	Japan	"K" Line Mitsui OSK Lines Neptune Orient Lines N.Y.K. Line OOCL Sea-Land	Vancouver Vancouver Vancouver Vancouver Vancouver U.S. ports
Pacific Coast/Australia-New Zealand Tariff Bureau	Australia, New Zealand	Australia New Zealand Direct Line Blue Star PACE Columbus Line	U.S. ports Vancouver U.S. ports
Australia/Canada Container Line Association	Australia	Blue Star PACE Columbus Line Australia New Zealand Direct Line	Vancouver U.S. ports U.S. ports
New Zealand/Canada Container Lines Association Conference Agreement	New Zealand	Blue Star PACE Columbus Line	Vancouver U.S. ports
Inter-American Freight Conference - Pacific Coast	Inbound/outbound conference serving Argentina, Brazil, Paraguay, Uruguay	CIAMAR E.L.M.A. Line Maruba S.C.A. Nedlloyd Line Norsul Line CMB (Belgian Line)	U.S. ports (Inbound) Vancouver Vancouver U.S. ports Vancouver Vancouver
West Coast/Middle East Canada Rate Agreement	Bahrain, Iran, Iraq, Oman, Saudi Arabia, United Arab Emirates, Yemen	American President Lines Maersk Line Sea-Land	U.S. ports Vancouver/U.S. ports U.S. ports
Mediterranean North Pacific Coast Freight Conference	Inbound/outbound conference serving ports in Mediterranean and Black Sea, Atlantic coast of Spain, Portugal, and Morocco	d'Amico Line Italia Line Zim Israel Navigation	U.S. Ports U.S. ports U.S. Ports
West Coast Canada to UK/Continent Container Conference	United Kingdom, northern Europe and Gibraltar/Hamburg Range	Canadian Transport Company Saga Forest Carriers International	Vancouver Vancouver
New Zealand/Pacific Coast North American Shipping Lines	New Zealand	Blue Star PACE Columbus Line	Vancouver U.S. ports

Source: National Transportation Agency

Table 7.15
Shipping Conferences Serving Canada Via East Coast Ports

Conference	Scope of Operations	Member Lines	Port of Call
Canadian Continental Eastbound Freight Conference Continental Canadian Westbound Freight Conference	Both conferences serve Belgium, France, Germany, Netherlands	Atlantic Container Line Canada Maritime Cast Limited Hapag-Lloyd OOCL Polish Ocean Lines	Halifax Montreal Montreal Halifax Montreal Halifax
Canada-United Kingdom Freight Conference Canadian North Atlantic Westbound Freight Conference	Both conferences serve the United Kingdom	same as above	same as above
American West African Freight Conference	Inbound/outbound conference serving West African ports and interior points	America-Africa-Europe Line Maersk Line SITRAM Torm West Africa Line Westwind Africa Line Wilhemsen Line Farrell Lines	U.S. ports Halifax U.S. ports U.S. ports U.S. ports U.S. ports U.S. ports
The "8900 Lines" Agreement	Middle East ports in Bahrain, Iraq, Iran Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates	Maersk Line Ntl Shipping Co. of S. Arabia Sea-Land United Arab Shipping Co. Waterman Steamship Co.	Halifax Halifax/Saint John Halifax/U.S. ports U.S. ports U.S. ports
Canada Westbound Rate Agreement Asia North America Eastbound Rate Agreement	Both conferences serve the Commonwealth of Independent States, Hong Kong, Indonesia, Korea, Malaysia, the People's Republic of China, the Philippines, Singapore, Taiwan, Thailand, Japan (CWRA only), and outports to Brunei, Kampuchea, Laos and Vietnam.	American President Lines Maersk Line "K" Line Mitsui OSK Lines Neptune Orient Lines N.Y.K. Line OOCL Sea-Land	MLB/Vancouver Halifax U.S. ports U.S. ports Halifax Halifax MLB/Vancouver MLB/Long Beach
Japan-East Canada Freight Conference	Japan	Mitsui OSK Lines N.Y.K. Line	U.S. ports Halifax
Canada/Australia-New Zealand Association of Carriers	Australia, New Zealand	Blue Star PACE Columbus Line Ocean Star Container Line Wilhemsen Line	Halifax/U.S. ports Halifax/U.S. ports Halifax Halifax
Inter-American Freight Conference - Atlantic Coast	Inbound/outbound conference serving Argentina, Brazil, Paraguay, Uruguay	A. Bottacchi S.A. E.L.M.A. Line Netumar Line Alianca S.A.	Halifax Saint John Montreal/Saint John U.S. ports (inb.)
East Canada South America Rate Agreement	Inbound/outbound conference serving Argentina, Brazil, Paraguay, Uruguay	Alianca S.A. American Transport Lines Columbus Line Ivaran Lines	U.S. ports U.S. ports Halifax/U.S. ports U.S. ports
East Canada Caribbean Rate Association	Barbados, Dominican Republic, Haiti, Jamaica, Trinidad, Leeward/Windward Islands	Navieras de Puerto Rico Sea-Land	U.S. ports Halifax/U.S. ports
Uniline/Great Lakes Transcaribbean Agreement	Caribbean Islands, Central America (East and West), South America West Coast, Colombia	Great Lakes Transcaribbean Agreement Uniline Naviera Universal S.A.	Montreal U.S. ports
Canada Caribbean Shipowners Association	Inbound/outbound conference serving various ports in the West Indies, Belize and Honduras	Bernuth Lines Seaboard Marine TEC Marine Trailer Marine Transport Co. Tropical Shipping	U.S. ports U.S. ports U.S. ports U.S. ports U.S. ports
Mediterranean Canadian Freight Conference	Inbound/outbound conference serving Italy, Spain and some French Mediterranean ports	Canada Maritime CAST Europe DSR-Senator Lines Jadroplov Zim Israel Navigation Metz Container Line	Montreal Montreal Montreal Montreal Halifax Montreal

Source: National Transportation Agency

Pacific Northwest to Europe

Hapag-Lloyd and Maersk started making use of Matson Navigation's new coastal shuttle to move feeder shipments from Vancouver to Los Angeles to connect with its service to northern Europe. Benelux Maritime Agencies ceased advertising services to northern Europe; however, Cascadia Container Line started a similar service utilizing container slots on a forest products carrier. In 1994, CAST joined the ranks of lines (Canada Maritime and OOCL) offering mini-landbridge services to west coast shippers via Montreal to Europe.

Far East

Major realignments are anticipated for 1995/1996 in the Far East trade. Meanwhile, existing services have undergone considerable change during 1994, especially on the east coast. MOL will join APL, Nedlloyd and OOCL in a service commencing in 1995 from the U.S. east coast via the Panama Canal. These lines will also cooperate on the Far East-Europe route. MOL's current partner on the transpacific, "K" Line, entered into partnership discussions with Hyundai, resulting in Hyundai's cancellation of its slot charter arrangement on the Northwest Express (NWX) service operated by NYK, NOL and Hapag-Lloyd calling at Vancouver. Furthermore, as a result of the revamp of these same carriers' PAX service, the NWX service was terminated altogether with Vancouver cargo rerouted through Seattle and a direct call added at Halifax.

On the east coast, Hoegh Lines, for many years calling at Halifax inbound from the Middle and Far

East, started offering an export service. Finally, China Ocean Shipping Company (COSCO) announced in 1994 that it would switch its all-water routing between the U.S. east coast and the Far East from the Panama to the Suez Canal.

In spite of the loss of the NWX service, the Pacific Northwest saw the inauguration of two new dedicated services in 1994. COSCO's Pacific North West (PNW) service will call at Seattle and Vancouver, while Hyundai's new Pacific Northwest Express service will call at U.S. ports only. Sea-Land now makes direct calls in Vancouver as part of its Pacific Express (PEX) service, and Evergreen's new Pacway service provides shippers with a direct link

to Singapore. Finally, Italia Line and Lloyd Triestino launched Asiapac, a weekly transpacific service between Asia and the northwest ports of Vancouver and Tacoma.

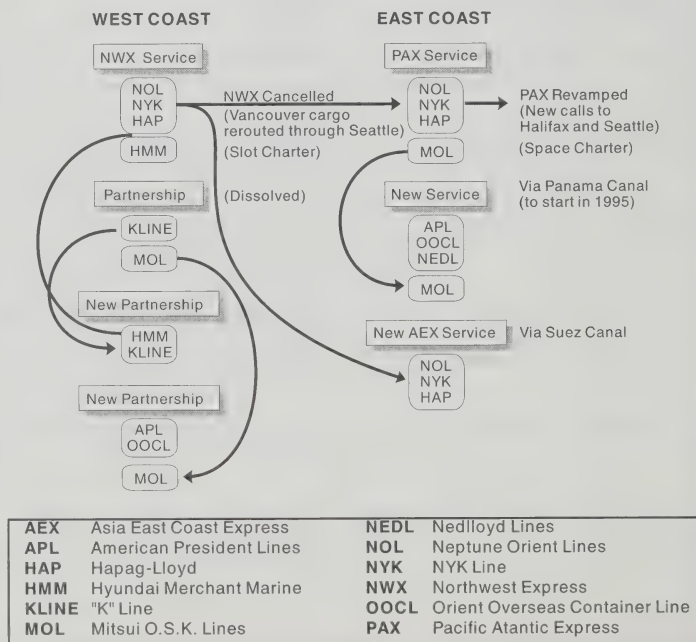
The Australian Trades

On the west coast, Blue Star Line discontinued its Pacific Coast Island breakbulk service in August of 1994. Australia New Zealand Direct Line (ANZDL) and Far Eastern Shipping Company (FESCO) announced the addition of new vessels to their fleets to improve sailing frequencies. South Pacific Interline withdrew its service which was replaced by Refrigerated Container Carriers out of Vancouver.

On the east coast, Mediterranean Shipping Company switched from a

Figure 7.10

Realignments on the Far East-North America Trade Route



transshipment service out of Montreal to exchanging slots with SafBank on its new service to South Africa and Australia which now calls at New York. Contship Ocean Star completed the upgrading of its fleet and NYK began offering an Australia service as an adjunct to its Far East service calling eastern Canada. Finally, FESCO introduced a mini-landbridge service to Australia from eastern Canadian ports.

Service Frequencies

On the western Canada-U.K./Continent route, landbridge services are growing in importance. In fact, since the ACL/CGM/Hapag-Lloyd service was disbanded in early 1993 and the conference dissolved, no all-water conference service has been available on this route. From the east coast, conference services are up significantly to the Mediterranean with the formation of the new MEDCAN conference, as were non-conference services,

reflecting the improved traffic offerings and more stable freight rates on the transatlantic route.

On the western Canada-Far East route, conference carriers have consistently offered a much larger number of weekly sailings than independents. The same is true for the eastern Canada-Far East route; however, the bulk of weekly sailings on this route involve landbridge routings. In recent years, the growth in conference landbridge services has been spectacular, reflecting the trend towards strategic alliances on the transpacific trade route.

Since 1992, a greater number of major lines sailing weekly to the Far East are offering feeder services to Australia. Conference carriers providing direct services to Australia have not offered weekly sailings since 1990, and those were all from the west coast. On the other hand, non-conference lines have always provided weekly sailings from either

coast, and have also offered landbridge services from the east coast since 1989. Conference lines have consistently offered an equal or greater number of bi-weekly (8-14 days) services than independents on both coasts.

Transit Times

While transit times have been fairly consistent on the eastern Canada-Far East route since 1987, improved transit times have been recorded on the transpacific for most destinations with the exception of South Korea. The improvements have been particularly marked for Taiwan and Singapore as a result of more direct calls at these countries' ports.

On the eastern Canada-U.K./Continent route, there is no significant trend. From western Canada, the dissolution of the conference on the route in 1993 caused a major disruption to the pattern, leaving only non-conference services available in 1994. To the Mediterranean, conference times have improved markedly in 1994 compared to 1993 with the new conference operating on this route.

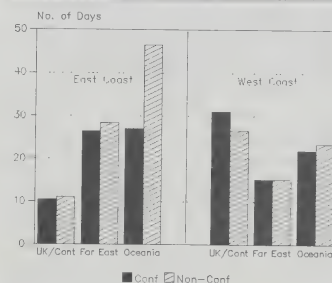
Table 7.16
Number of Weekly Landbridge Services

Time Period (Sept/Oct)	Eastern Canada to Far East		Western Canada to U.K./Continent	
	Conference	Non- Conference	Conference	Non- Conference
1987	9	3	2	—
1988	10	1	2	—
1989	12	3	3	—
1990	14	3	3	—
1991	17	6	5	—
1992	23	6	4	3*
1993	28	9	4*	4
1994	24	13	8*	3

* No all-water service offered on the route

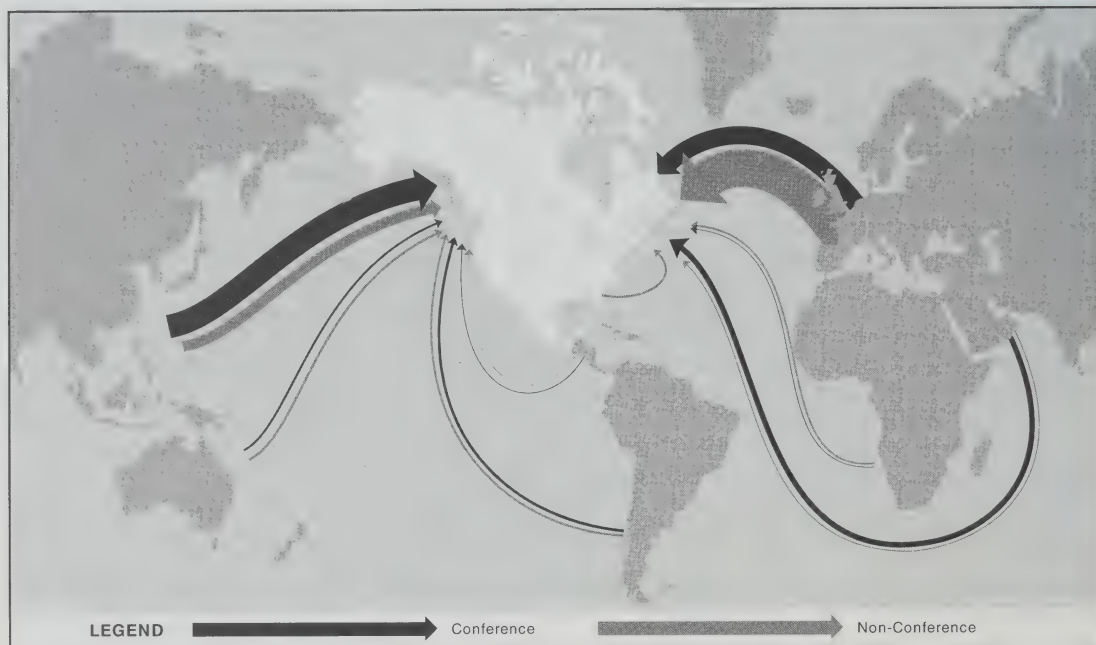
Source: Transport Canada

Figure 7.11
Average Outbound Transit Times
(Excluding Landbridge Services) 1994



Source: Transport Canada

Figure 7.12

Conference vs Non-Conference Liner Imports, 1993

In the Australian trades, no overall trend is apparent, although the shortest transit time for a non-conference carrier did improve significantly over 1993 from western Canada to New Zealand.

Liner Traffic

Liner carriers handled eight per cent of Canada's international marine trade; this represented close to 18 million tonnes in 1993 and an increase from the previous year of approximately 1.5 million tonnes. Liner imports increased by 1.3 million tonnes in 1993, an 18 per cent rise over 1992. On the other hand, liner export tonnages remained somewhat stable at 10.8 million tonnes.

1993 Liner Imports* (Tonnes)

Imports from	Conference	Non-Conference
Europe	1,208,137.70	2,300,370.14
Middle East	355.93	74,853.02
Africa	5,040.58	122,277.73
Asia	1,552,292.66	688,637.60
Oceania	138,222.78	163,744.70
South America	173,740.70	143,594.71
Central America	1,914.97	53,294.04
North America**	0.00	329,794.61

* Excluding U.S. cargo and including cargo diverted through U.S. ports.

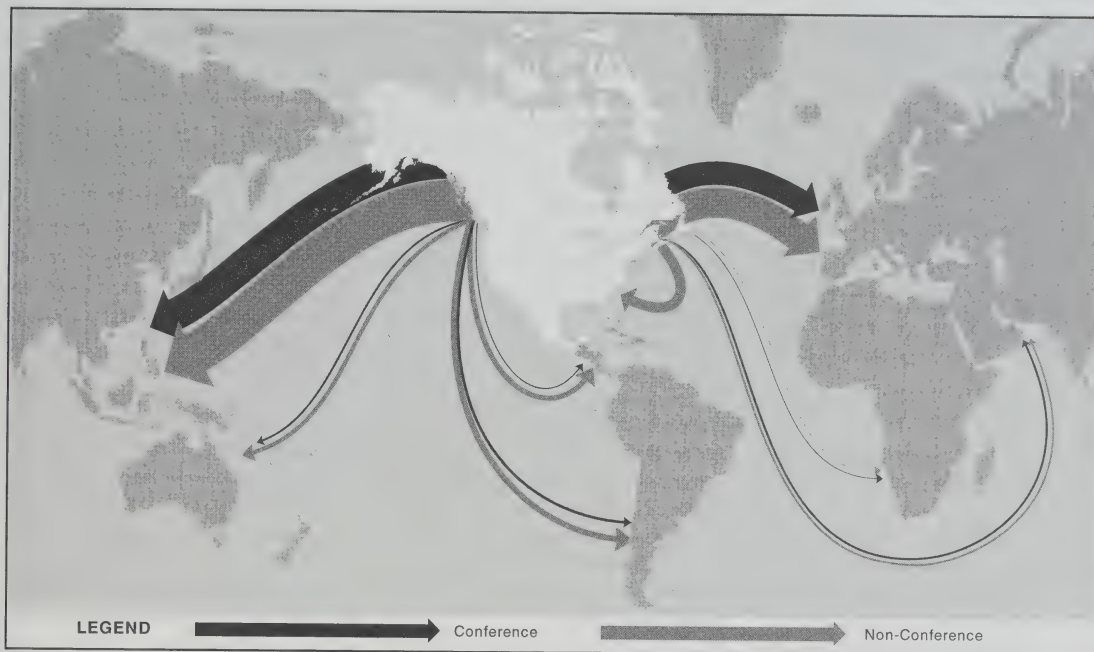
** Including U.S.A., Mexico, Greenland and St. Pierre & Miquelon.

Source: Statistics Canada and the *Journal of Commerce's* P.I.E.R.S.

Non-conference operators captured a 60 per cent market share of total liner trade in 1993. On the west coast, conference carriers lost import and

Figure 7.13

Conference vs Non-Conference Liner Exports, 1993



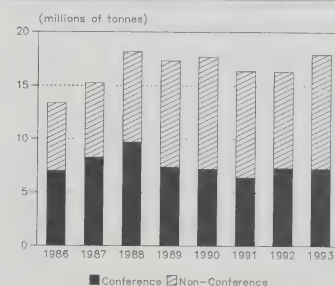
1993 Liner Exports* (Tonnes)

Exports from	Conference	Non-Conference
Europe	1,556,780.50	1,980,470.39
Middle East	131,744.31	130,392.74
Africa	22,974.15	90,215.50
Asia	2,122,360.96	2,761,054.18
Oceania	120,047.58	266,343.00
South America	170,108.60	387,855.10
Central America	65,985.98	337,355.76
North America**	0.00	670,047.07

* Excluding U.S. cargo and including cargo diverted through U.S. ports.

** Including U.S.A., Mexico, Greenland and St. Pierre & Miquelon.

Source: Statistics Canada and the *Journal of Commerce's* P.I.E.R.S.

Figure 7.14
Market Shares of Canadian
Liner Trade Cargo

Tonnages include Canadian transshipments via U.S. ports.

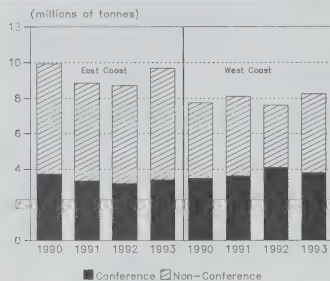
Source: Statistics Canada, the *Journal of Commerce* (PIERS)

export tonnages to independents, 54 per cent in 1992 to 46 per cent in 1993; the loss was not as significant

on the east coast. Conference lines carried the bulk of imports through the west coast (66 per cent) while non-conference carriers handled the majority (over 60 per cent) of

exports on both coasts as well as 68 per cent of imports on the east coast.

Figure 7.15
Market Shares of Canadian
Liner Trade Cargo by Coast



Tonnages include Canadian transshipments via U.S. ports.

Source: Statistics Canada, the *Journal of Commerce* (PIERS)

Freight Rates

Canadian international liner traffic is concentrated on two major trade lanes, the Transpacific and the North Atlantic. Trade between Canada and the Far East constitutes the largest segment of liner traffic and is served by the two largest shipping conferences, the Canada Westbound Rate Agreement (CWRA) and the Asia North America Rate Agreement (ANERA). On the North Atlantic, four conferences carry Canadian cargo to and from northern Europe and the U.K., the Canadian Continental Eastbound and Continental Canadian Westbound and Freight Conferences and the Canada-United Kingdom and Canadian North Atlantic Freight Conferences.

The rates indices presented in Appendix D.2 track the lowest filed rates in current Canadian dollars (inclusive of all surcharges) for high volume commodities shipped to/from Canada.

Competition

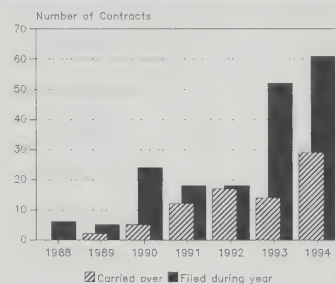
Amendments to the *Shipping Conferences Exemption Act (SCEA)* in 1987 were specifically designed to encourage intra-conference competition providing for confidential service contracts and independent action by conference member lines.

Service Contracts

The Agency accepted filings for 61 service contracts from shipping conferences in 1994, an increase of nine from 1993. Average duration of these contracts was one year.

There were 26 "joint" contracts, a threefold increase over last year. About 80 per cent of these contracts applied to export commodities. The filing of joint service contracts is another indication of the carrier cooperation which has become increasingly prominent in international liner trade

Figure 7.16
Service Contracts Filed with the Agency
1988 - 1994



Source: National Transportation Agency

Of the remaining 35 contracts, 21 involved inbound shipment of manufactured goods and some primary commodities, while 14 dealt with exports of primary and unfinished commodities.

Service contracts were utilized on two out of three of Canada's major

trade routes in 1994. Eight conferences, compared to eleven in 1993, were responsible for all service contract filings.

Independent Action (IA)

Overall, the use of IA by conferences serving the Canadian liner trades has been declining since 1991. Fewer conferences are using this rate option and those who do are not filing as many IAs as they used to.

The Agency's 1994 Survey of Shipping Conferences showed that IA activity had either decreased or stayed the same relative to 1993. The vast majority of IAs were filed by less than ten per cent of the conferences; the other 90 per cent filed fewer than ten IAs in 1994. Conferences filing IA rates reported those rates to be less than 20 per cent lower, on average, than standard conference rates.

Conference Perspective on Competition

In the Agency's Survey of Shipping Conferences, the most frequently mentioned factors affecting conference operations in 1994 were the economic climate in Canada and abroad, competition from non-conference carriers and new entries, and shipper demands related to rates.

In recent years, international liner shipping has undergone major change in the form of carrier alliances and agreements. Market forces such as shipper demands, capital costs and level of service offered by competitors on the same trade route, play a crucial role in shipping lines' decisions to initiate or participate in such agreements. In a capital-intensive industry such as liner shipping, carriers facing the

"In the future, even the strongest shipping companies will have trouble surviving alone. The industry is moving into an era of alliances among the mega-carriers. Old shipping conferences and consortia aren't strong enough anymore." (Mitsui OSK Lines, Annual Report, 1994)

challenge of delivering the quality of service expected by their customers, have found that the best way to achieve this is through mutual cooperation. This has taken the form of slot or space charter agreements, vessel sharing, partnerships and all-encompassing agreements such as the TAA or the TSA.

PORT SYSTEM

Structure

Canada Ports Corporation (CPC), a Federal Crown corporation, administers the largest ports in the country through local port corporations (Vancouver, Prince Rupert, Montreal, Quebec, Halifax, Saint John and St. John's) or as divisional ports (Churchill, Port Alberni, Port Colborne, Prescott, Trois-Rivières, Port Saguenay/Baie des Ha! Ha!, Sept-Îles and Belledune). In addition, Ridley Terminals, a bulk

handling terminal located in Prince Rupert, is a wholly-owned subsidiary of CPC.

The CPC ports are generally large, multipurpose ports which provide a full range of competitively priced ships' services, berthage facilities and cargo handling and protection. They frequently act as landlords, leasing property and facilities to the private sector, including stevedoring firms, shipping companies and terminal operators. Local corporations have their own boards of directors and manage and operate their ports with a high degree of autonomy. CPC ports handle approximately 50 per cent of all Canadian port traffic.

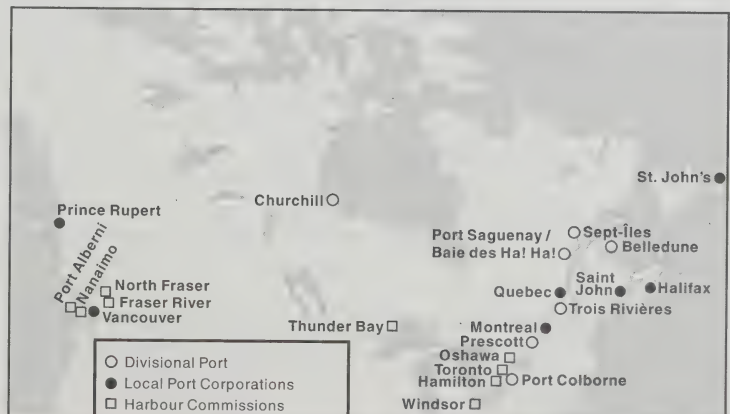
Reporting to either the Minister of Transport or to Cabinet, Harbour Commissions operate semi-autonomously in nine ports in Canada; Port Alberni, Nanaimo, North Fraser, Fraser River, Thunder Bay, Windsor, Hamilton, Toronto and Oshawa. They handle about 15 per cent of Canada's waterborne tonnage, including commodities

such as steel, iron ore, forest products and other bulk and general cargo, on both a domestic and international basis.

The 15 CPC ports plus the nine ports administered by harbour commissions handle about two-thirds of Canada's marine traffic.

The maintenance and administration of 316 public port facilities and 298 public harbours at 526 sites across Canada falls under the purview of the Canadian Coast Guard's Public Harbours and Ports directorate. The ports facilities vary in scope from high- and low-volume commercial ports, to ferry ports, to ports which service isolated communities where the only economic means of transportation may be marine. Public ports handle approximately 20 per cent of Canada's waterborne tonnage which

Figure 7.17
Canada's Ports



includes major commodities such as salt, petroleum products, forest products, ores and concentrates and construction materials.

The remaining port facilities are either operated privately or by other groups such as municipalities or provincial governments.

Finally, there are approximately 2,200 harbours used for commercial fishing or recreation which are under the administration of the Small Craft Harbours Branch of the Department of Fisheries and Oceans.

Services

The Vancouver Port Corporation (VPC) approached the money markets in 1994 in order to raise \$100 million dollars to support its expansion. May 18 marked the start of construction of the Deltaport Container Terminal which is slated for completion in 1996. With its two berths, five container cranes, on-dock rail (capable of handling two doublestack trains at a time) and fully computerized gate, yard and vessel operations, the capacity of this terminal will be 428,000 TEUs per annum, almost double that of Centerm and Vanterm together. This new terminal is also one hour closer to Asia than Seattle, and four hours closer than Tacoma.

Additional investments went into refurbishing of the Ballantyne terminal and work at Lynnterm. Vanterm's fifth crane entered service in April of 1994.

The **Port of Montreal** capitalizes on its inland location and high-speed intermodal links to major markets in Canada and in the U.S. north-east

and mid-west. It is estimated that more than half of Montreal's container traffic originates or terminates in the U.S. midwest. Continuing its strategy from the previous year, general tariffs (harbour dues, charges for berthage and anchorage, wharfage and the railway as well as grain elevation and storage) remained unchanged at the Port of Montreal in 1994 and passenger handling charges remained frozen for the fourth consecutive year. An incentive program for containerized general cargo included a bonus to be shared by shipping lines that contributed to increasing the port's container throughput.

Several of the major ports maintained a freeze on general tariffs in 1994.

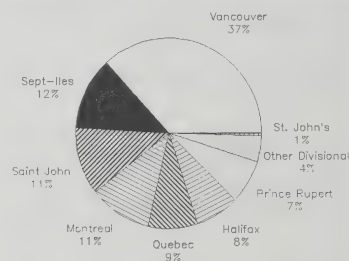
The Port of Halifax lies on the Great Circle Route across the North Atlantic, making it the closest North American port to Europe. Combined with its deep-water harbour, this gives the port natural advantages over other Canadian and U.S. ports. The port continued its freeze on general tariffs in 1994 and concessions by waterfront unions resulted in reductions of costs for lines calling at the port. In a major act of co-operation, port service providers, including the Halifax Longshoremen's Association and the Maritime Employers Association (MEA) developed incentive rates to attract U.S. Midwest business.

CN North America's intermodal terminal, which opened in the port late in 1993, completes the only coast-to-coast double-stack rail

network in North America. Halterm opened its new Marine Terminal Entranceway, allowing the terminal to handle additional volumes of truck traffic more efficiently.

Both the Ports of Saint John and St. John's held their tariffs at 1993 levels. The addition of a floating ro-ro ramp at Saint John now allows the continuous handling of cargo throughout the full tidal range in the port. The Port of Prince Rupert saw the opening of the new BC Ferries terminal building in May, 1994, representing a major upgrading of passenger service and facilities.

Figure 7.18
Canada Ports Corporation
Total Traffic Tonnages



Source: CPC "Statistical Handbook 1994"

In the wake of suggestions that the Port of Churchill be closed because of continuing operating losses, a federal-provincial task force issued its report in early January, 1995. It recommended that the federal government spend \$27 million by 1997 on the Port with additional expenditures after this time (if port traffic increased sufficiently) to upgrade the rail bed between Winnipeg and Churchill (\$91 million) and, over a 20-year period, replace an aging fleet of CN grain cars (\$145 million).

Table 7.17
Profile of Major Canadian Ports

	Local Rail Access	Deepwater Approach	Limiting Channel Depth* (meters)	Cargo Handling Terminals by Type				
				Container	General Cargo	Dry Bulk	Liquid Bulk	Ro-Ro Facilities
Local Port Corporations								
Vancouver	BCR, CN CP, BN	Yes	15.2	2	8	12	6	Yes
Halifax	CN	Yes	18.3	2	6	2	3	Yes
Montreal	CN, CP	No	12.2	5	11	9	13	Yes
Prince Rupert	CN	Yes	35.0	—	2	2	—	Yes
Quebec	CN, CP	Yes	15.5	—	3	4	2	Yes
Saint John	CN, CP	No	9.2	1	8	2	3	Yes
St. John's	None	No	11.7	1	4	1	4	Yes
Canada Ports Corporation — Divisional Ports								
Belledune	CN	Yes	11.6	—	—	2	—	No
Churchill	CN	No	7.6	—	1	1	—	No
Port Colborne	CN, CP	Seaway	8.2	—	—	1	—	No
Saguenay	None	Yes	13.8	—	1	—	1	No
Prescott	CN, CP	Seaway	8.2	—	—	2	1	No
Sept-Îles	QNS&L	Yes	80.0	—	3	3	1	Yes
Trois-Rivières	CP	No	11.0	—	1	3	3	Yes
Harbour Commissions								
Fraser Port	CN, CP, BN, SRY	No	7.6	1	3	1	1	Yes
Nanaimo	EN	No	13.4	—	4	—	1	Yes
Port Alberni	EN	Yes	18.3	—	2	—	—	No
Thunder Bay	CN, CP	Seaway	8.2	—	1	12	4	No
Toronto	CN, CP	Seaway	8.2	1	1	12	2	Yes
Windsor	CN, CP ESSEX	Seaway	8.2	—	2	9	1	Yes
Hamilton	CN	Seaway	8.2	—	2	10	—	Yes
Oshawa	CN, CP	Seaway	8.2	—	1	1	—	Yes

* Depth at Low Water

Source: Lloyd's Ports of the World 1994; Seaports of the Americas, The 1994 AAPA Directory

Operations

CPC Ports

The total tonnage moved through CPC ports in 1994 increased 11 per cent from 1993 to reach over 184 million tonnes, the highest since 1988. This change is reflected in the increases of 11 per cent in bulk cargo, both dry and liquid, and 12 per cent in general cargo. In terms of container cargo, overall increases of 15.5 and 14.2 per cent were achieved in the container tonnage and number of TEUs.

Local Port Corporations

The Port of Vancouver handled 67.6 million tonnes of cargo in 1994, an increase of 11 per cent over 1993. Bulk products, forest products and containers all registered increases. Coal (23 million tonnes), grain (14 million tonnes) and potash (4.1 million tonnes) shipments were up 10.5, 13.9 and 49.8 per cent respectively. Pulp (2.6 million tonnes) and newsprint (206,000 tonnes) exports were up 24 and 23 per cent while lumber remained constant at 2.3 million tonnes.

Container throughput rose 14 per cent to 493,843 TEUs despite a twelve day strike by the more than 3,500 B.C. longshoremen starting on January 28, 1994. More than 8,000 containers were diverted through Seattle and Tacoma, while 70 ships, including 37 grain carriers, sat idle, waiting until the strike was resolved by a federal back-to-work order. However, the situation was reversed when a subsequent Teamster's strike at the Port of Tacoma resulted in Sea-Land moving cargo through Centerm. Although Sea-Land owns its own terminal at Tacoma and would probably never move all of its

business to Vancouver, it made Vancouver a scheduled port of call, adding about 350 containers per week to Centerm's throughput.

Vancouver also profited from a scheduled feeder-service initiated by Matson Navigation linking Los Angeles, Seattle and Vancouver and adding about 25,000 boxes a year to Vancouver container traffic.

Reflecting the continued growth of the Alaska cruiseship industry, an

increase of 14 per cent from 1993 brought the number of revenue passengers through the Port of Vancouver to over 591,000.

The Port of Montreal reported a total traffic tonnage increase of 3.6 million tonnes from 1993 to reach a record 20.1 million tonnes in 1994. Reaffirming its place as the number one container port in Canada and the North American eastern seaboard, a record 7.1 million tonnes of containerized cargo moved through

Table 7.18
Canada Ports Corporation - Port Traffic Trends

	Tonnes (000s)		% Change
	1994	1993	
Local Ports			
Vancouver	67,633	60,762	11.3
Prince Rupert	13,824	11,735	17.8
Montreal	20,083	16,500	21.7
Quebec	16,029	13,731	16.7
Halifax	14,090	14,112	-0.2
St. John's	924	860	7.4
Saint John	21,145	19,570	8.0
Divisional Ports			
Churchill	322	291	10.7
Port Colborne	13	43	-69.8
Prescott	554	402	37.8
Trois-Rivières	1,756	1,719	2.2
Port Saguenay/	308	274	12.4
Baie des Ha!Ha!	4,055	4,049	0.1
Sept-Îles	22,812	21,312	7.0
Belledune	1,111	801	38.7
Total CPC	184,659	166,164	11.1

Source: CPC "Statistical Handbook 1994"

the port, an increase of 18.9 per cent from 1993. This represented 728,799 TEUs in 1994 compared to 598,120 the previous year.

The Port of Halifax registered a slight decrease in overall tonnage in 1994, primarily in the liquid bulk sector. However containerized cargo through the port increased to 2.6 from 2.5 million tonnes the previous year.

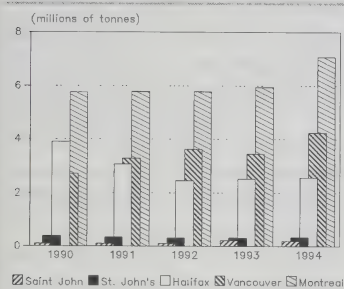
shipments rose by 23 per cent to reach 1.6 million tonnes. In 1993, container volume through Saint John reached 231,000 tonnes, gaining 100,000 tonnes diverted from Montreal due to abnormally heavy ice conditions in the St. Lawrence. This year, with only 14,000 tonnes diverted from Montreal, the total of 192,000 tonnes is a 17 per cent drop from 1993.

showing an increase of seven per cent over last year. Gains were made in the tonnage of iron and other metallic ores moving through the port. All other divisional ports showed gains in tonnage except for Port Colborne.

Harbour Commissions

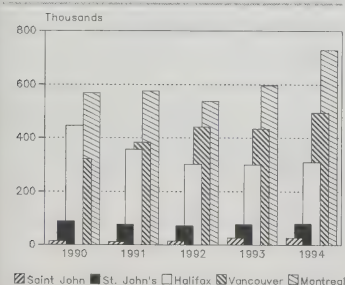
Thunder Bay experienced an overall increase in tonnage of 20.5 per cent,

Figure 7.19
Container Traffic Through Major
Canadian Container Ports



Source: CPC "Statistical Handbook 1994"

Figure 7.20
Container Traffic Through Major
Canadian Container Ports - TEUs



Source: CPC "Statistical Handbook 1994"

Saint John posted a record year for total cargo in 1994, increasing eight per cent from 1993 to 21.1 million tonnes. Petroleum, totalling nearly 18 million tonnes, was again the biggest item in 1994, while potash

Table 7.19
Canada Ports Corporation Container Traffic

	Tonnes (000s)			TEUs		
	1994	1993	% Change	1994	1993	% Change
Vancouver	4,246	3,458	22.8	493,843	434,004	13.8
Montreal	7,073	5,948	18.9	728,799	598,120	21.8
Halifax	2,565	2,519	1.8	311,097	300,933	3.4
St. John's	340	326	4.3	80,803	77,318	4.5
Saint John	193	231	-16.5	28,424	28,366	0.2
Total	14,417	12,483	15.5	1,642,966	1,438,741	14.2

Source: CPC "Statistical Handbook 1994"

St. John's increase of 7.4 per cent in total tonnage is predominantly due to increased liquid bulk cargo moving through the port. The port also showed an increase in container traffic. Prince Rupert's increased grain and coal shipments, at 22 and 23 per cent respectively, more than made up for losses in forest products resulting in an 18 per cent overall increase. Increased dry and liquid bulk cargo at the Port of Quebec was responsible for the overall increase in tonnage.

Divisional Ports

Sept-Îles maintained its hold on the number one position for total traffic through an eastern Canadian port,

largely due to an increase in the movement of grain through the port in 1994. Hamilton Harbour Commission reported a 2.4 per cent increase in total traffic in 1994 with dry bulk, particularly iron ore, accounting for the largest portion of movements. Windsor Harbour Commission showed a marginal increase over 1993. General cargo through the port more than doubled, and lumber, petroleum and grain increased by over 70 per cent, but a reduction in the movement of railroad barges offset the gains made in the other commodities.

Toronto experienced a large increase in the movement of general cargo,

Table 7.20
Harbour Commissions Total Traffic

	Tonnes (000s)		% Change
	1994	1993	
Oshawa	110	228	-51.8
Toronto	1,545	1,495	3.3
Thunder Bay	13,839	11,488	20.5
Hamilton	12,702	12,406	2.4
Windsor	4,482	4,450	0.7
Port Alberni	306	280	9.3
Nanaimo	1,346	1,385	-2.8
North Fraser	N/A	20,957	
Fraser River	24,302	25,045	-3.0

Source: Harbour Commissions

particularly steel, in 1994. Increases in Oshawa's movements of asphalt and calcium chloride could not offset the losses in other commodities, particularly steel, gasoline and millscale.

Other Ports

In 1994, 21.6 million tonnes of cargo moved through Port Cartier, an increase of 12 per cent from 1993. Iron ore and grain tonnages increased by 12 and 18 per cent respectively, to 16.3 and 4.5 million tonnes. Port Cartier was second only to Sept-Îles on the Canadian east coast in terms of total tonnage throughput, followed closely by Saint John.

Tonnage data for ports administered by Harbours and Ports was unavailable for 1994/95. Tonnage data for 1993/94 was incomplete but gross revenues of the ports over this

period were up six per cent from 1992/93.

Competition with U.S. Ports

A KPMG Management Consulting study, titled "Study of Public Charges and Financial Assistance at Ports" concluded that government support can have significant impact upon the competitive position of U.S. and Canadian ports. However, taxation regimes within the two countries are not generally considered to be significant advantages for ports on either side of the border.

U.S. ports feel that the Harbour Maintenance Trust Fund, built from a tax levied on shippers using U.S. ports, is responsible for much diversion of U.S. cargo through Canadian ports. Additionally, they argue that a proposed increase in

U.S. vessel tonnage tax to pay for new ship operating subsidies would divert substantial new volumes via Canada.

U.S. Traffic via Canada

The U.S. Department of Transportation, Maritime Administration produced a report "U.S. Exports & Imports Transshipped via Canadian Ports - 1993". This report stated that 2.1 million tonnes of U.S. exports and 2.2 million tonnes of imports were transshipped via truck or rail through Canadian ocean ports. The tonnage increases were 12.8 and 21.5 per cent respectively from 1992 and the total represents about 4.1 per cent of U.S. liner cargo. In an analysis of the transshipments by customs district, Detroit had about 73 per cent of exports, with Seattle at a distant second at nine per cent. For imports the spread was more diverse with Chicago at 27 per cent, Detroit at 20 per cent and Buffalo at ten. It seems clear that Canadian east Coast ports are handling the bulk of the diverted U.S. traffic.

Canadian Traffic via U.S.

A total of 4.4 million tonnes of Canadian cargo, both containerized and non-containerized, was routed through U.S. ports in 1994, an increase of 29 per cent over 1993. Diversion of import traffic was up 47 per cent compared to an increase of 13 per cent for exports. Diverted Canadian container traffic increased by 14 per cent in 1994, with exports up only slightly more than imports.

Seattle, Tacoma and New York handle the largest tonnages of diverted Canadian traffic, of which 40 per cent originates or terminates

Figure 7.21
West Coast Ports

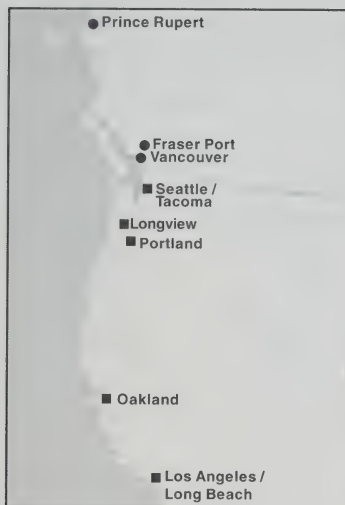
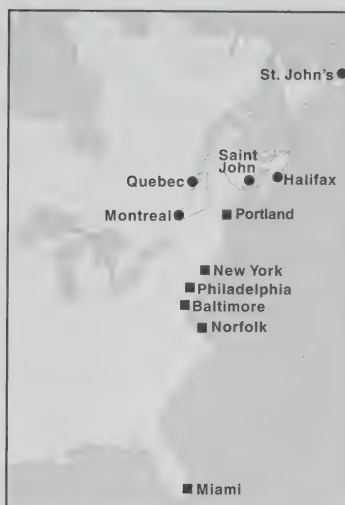


Figure 7.22
East Coast Ports



in Ontario, 26 per cent in Quebec and 21 per cent in British Columbia.

Imports via U.S.

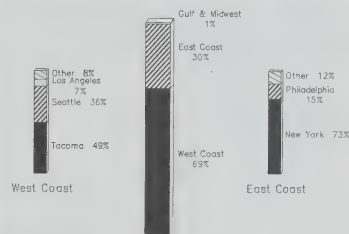
The leading countries of origin for Canadian imports shipped through U.S. ports in 1994 were Japan, U.K., Venezuela, and China. Canadian imports via U.S. east coast ports increased by some 370,000 tonnes, slightly surpassing imports via the west coast at about 43 per cent of the

total. Over 150,000 tonnes of Venezuelan crude oil was routed through the U.S. in 1994, moving through Gramercy, Louisiana to Alberta and through Portland, Maine, to Quebec.

Almost 70 per cent of containerized imports routed through the U.S. was via west coast ports, mainly at Seattle and Tacoma. Seventeen thousand additional TEUs came

through the U.S. west coast in 1994, while transshipments via the U.S. east coast increased by about 2,500 TEUs. Over 58 per cent of all import container traffic routed via U.S. ports originated in Japan, China, Hong Kong and Korea.

Figure 7.23
Canadian Import Cargo Route Through U.S. Ports - TEUs by U.S. Coast and Port

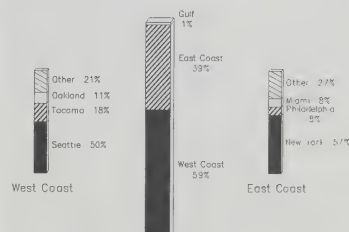


Source: *Journal of Commerce* (PIERS)

Exports via U.S.

More than half of diverted Canadian export traffic moved through U.S. west coast ports, predominantly Seattle and Tacoma, with about 30 per cent moving through the east coast.

Figure 7.24
Canadian Export Cargo Route Through U.S. Ports - TEUs by U.S. Coast and Port



Source: *Journal of Commerce* (PIERS)

West coast ports accounted for 59 per cent of Canadian export container traffic moving through U.S. ports in 1994 while east coast ports accounted for 39 per cent.

Table 7.21
Canadian Cargo Routed Through U.S. Ports - 1994

	Imports		Exports	
	TEUs	Tonnes	TEUs	Tonnes
U.S. East Coast Ports	51,506	1,022,441	56,108	628,023
U.S. West Coast Ports	120,744	927,842	84,133	1,084,107
U.S. Gulf Coast Ports	1,395	268,352	1,990	293,777
U.S. Midwest Ports	10	152,054	0	0
Total	173,655	2,370,689	142,231	2,005,907

Source: *Journal of Commerce* (PIERS)

Seattle and Tacoma handled two out of every three TEUs moving through the west coast; New York handled a little more than half of the east coast traffic.

As with imports, Japan was the primary destination for these shipments, followed by four more Pacific Rim countries.

CRUISESHIP INDUSTRY

Structure

According to the Cruise Lines International Association (CLIA), nearly 5,000,000 passengers worldwide took cruise vacations in 1994, which represented an increase of about eight per cent over 1993. Cruising is the fastest growing vacation category in North America, and this trend is clearly reflected in the numbers of cruise ship passengers passing through Canadian ports on both the east and west coasts during the May to October cruising season.

There are a myriad of lock, harbour and river cruises, as well as excursions such as those offered for whale-watching — all offered by local operators on Canadian vessels. In the extended cruise arena, however, Canadian lines and vessels play a relatively minor role, with foreign-based companies providing the vast majority of cruise operations calling at Canadian ports. There are two basic categories of extended cruises — the “luxury cruise” and the “pocket cruise”, distinguished by vessel capacity of more or less than 150 passengers. In general, the pocket cruise industry in North

Table 7.22

Origins/Destinations of U.S. Traffic Transshipped Via Canada - 1993

Exports		Imports	
Country	Tonnes	Country	Tonnes
United Kingdom	424,297	Germany	462,030
Germany	309,737	United Kingdom	313,739
Netherlands	207,098	France	242,106
Italy	183,134	Italy	191,888
Belgium/Lux	180,673	Netherlands	138,540
France	162,369	Belgium/Lux	109,742
Spain	105,302	Spain	72,576
Ireland	72,456	Japan	62,469
Japan	67,524	Austria	56,317
Switz/Liecht	36,527	Sweden	48,655
Denmark	28,634	Russia & Ukr	45,626
Sweden	28,344	Finland	43,817
Russia & Ukr	26,686	Switz/Liecht	43,383
Austria	25,997	China	39,090
South Africa	17,049	Ireland	36,676
S. Korea	14,966	Denmark	31,596
Australia+Isl	14,419	Taiwan	28,862
Taiwan	12,972	S Korea	18,012
Singapore	12,712	Hungary	13,143
Hong Kong	12,042	Singapore	2,677
Other	148,418	Other	211,400
Total	2,091,355	Total	2,212,344

Source: U.S. Department of Transportation, Maritime Administration

America is dominated by U.S.-owned and operated vessels while luxury cruises tend to be offered on foreign-flagged vessels owned by operators who are neither Canadian nor American.

A port of call which is a point of embarkation/disembarkation, such as Vancouver, Montreal or Quebec City, reaps many benefits. The British Columbia Ministry of Small Business, Tourism and Culture,

The Alaska cruise industry contributed an estimated \$155.6 million to the Canadian economy.

Industry Canada, and the North West CruiseShip Association commissioned a study, titled “The Alaska Cruise Industry: Benefits to Canada” which

Table 7.23

Origins/Destinations of Canadian Traffic Transshipped Via U.S. - 1993

Exports		Imports	
Country	Tonnes	Country	Tonnes
Japan	278,591	Japan	166,556
Brazil	145,131	Hong Kong	132,538
Korea Rep	132,564	China - Taiwan	120,731
China - Taiwan	123,971	Australia	119,295
Hong Kong	105,050	United Kingdom	107,620
United Kingdom	70,870	New Zealand	87,506
Australia	66,981	Korea Rep	77,756
Venezuela	56,932	Brazil	75,763
Malaysia	52,839	PR China	74,334
Saudi Arabia	45,687	Germany	71,909
New Zealand	41,181	Indonesia	68,142
Egypt	38,046	Thailand	46,119
Portugal	37,479	Philippines Rep	45,276
India	32,216	Malaysia	37,697
Trinidad	30,932	Argentina	37,293
France	27,232	Belgium	31,103
Argentina	25,557	France	30,955
Philippines Rep	24,417	Italy	28,860
PR China	23,595	Chile	27,960
Chile	22,336	Netherlands	22,193
Other	400,193	Other	201,701
Total	1,781,800	Total	1,611,307

Source: *Journal of Commerce* (PIERS)

was released in June 1994. This study projected that the direct expenditures in Canada by the large cruise lines and their passengers on the Alaska cruises in 1994 would be \$155.6 million. About 45 per cent of this figure comes from the ship-related expenditures such as bunkering, provisioning, pilotage, stevedoring, port charges, and maintenance and is based on the "home port" advantage of Vancouver. Other cruise line

expenditures were for passenger handling, office and related services, advertising and promotion in Canada, commissions to travel agents and crew wages. On the part of the passengers themselves, air fares, airport fees, hotel and personal expenditures, and pre- and post-cruise tours were taken into consideration. Even as an enroute port of call, communities and ports benefit from the tourist dollars

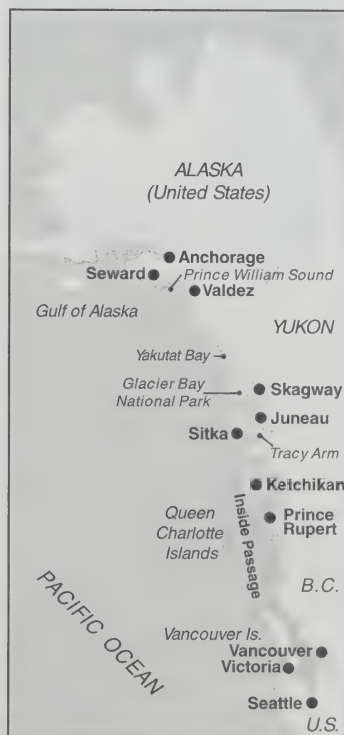
generated on local tours as well as from the usual port and harbour fees.

The West Coast

The Port of Vancouver is the home port for the largest proportion of the luxury cruiseships offering Alaska Cruises, serving as the principal point of passenger embarkation and disembarkation as well as for major vessel servicing. The cruises offered are seven and 14-day round-trips, with the option of one-way journeys of three, four or seven days. Seven day cruises tend to be the most popular. Cruise options include trips up the Inside Passage or the longer Glacier Route which continues up into the Gulf of Alaska. Ports of call

Figure 7.25

CruiseShip Ports of Call The West Coast



and land packages provided vary with each line. On some cruises, Victoria and occasionally Prince Rupert are enroute stops while Alaskan ports of call may include Ketchikan, Sitka, Juneau or Seward. Vancouver is also an enroute stop on various other cruises, such as round-trip Alaska cruises out of San Francisco and Los Angeles.

The pocket cruise appeals to a different market than the large scale cruise, trading off some of the amenities offered on the luxury vessels for access to smaller fjords, inlets and ports; for example, in addition to Victoria's inner harbour, the berths at Granville Island in Vancouver, and Prince Rupert, the smaller vessels may call at

Chemainus or Campbell River on Vancouver Island.

Eastern Canada

The luxury cruiseships ply three major routes on a regularly scheduled basis. First is along the Eastern Seaboard and St. Lawrence River up to Montreal; the second route is between Montreal, the islands of St.-Pierre and Miquelon, and Quebec City; and third, a recently-added three day round-trip out of New York to Saint John and Halifax. Pocket cruises travel the St. Lawrence between Montreal/Quebec City and Kingston or Rochester, or along the Erie Canal and Hudson River to Warren, New York. The Canadian embarkation/disembarkation point for the

majority of luxury cruises is generally at Montreal while for the pocket cruises out of the U.S., it is at Quebec City.

Two Canadian-flagged vessels operate in Eastern Canadian waters. St. Lawrence River Cruises operates a schedule of five-day, one-way cruises between Kingston and Montreal, Quebec or Ottawa on the 66-passenger *M.V. Canadian Empress*. Ontario Waterway Cruises also operates five-day, one-way cruises on the Trent-Severn Waterway and Rideau Canal on the 24-passenger *Kawartha*. The lack of Canadian-flagged vessels in the cruise industry, particularly in the pocket cruise segment on the St. Lawrence River can be partially

Figure 7.26

CruiseShip Ports of Call — Eastern Canada



attributed to high Canadian Coast Guard safety standards. For large vessels, international standards apply, while on small vessels the Canadian standards are more stringent, particularly with respect to lifesaving equipment and fire protection. U.S. vessels which call at Canadian ports are not subject to the same standards, which translates into an advantage of lower operating costs.

Marine Atlantic, which operates a cargo/passenger service to communities along the Labrador coast, introduced a "Labrador Coastal Adventure Cruise" in order to make use of excess capacity. These five, eight and fifteen-day cruises are coordinated with the normal sailing schedule and an interpreter is provided on the vessel *Northern Ranger*. In the first and second years, they carried approximately 100 and 160 passengers respectively out of a maximum annual capacity of 182 cruise bookings on this vessel.

Great Lakes

The Great Lakes is seen to offer great potential for a cruise industry, but early efforts to establish such operations have been reluctantly aborted. In one case, a schedule of trips offered in 1994 was cancelled due to lack of reservations; another operator, discouraged by the numerous agencies and authorities involved in operating through the St. Lawrence/Great Lakes system, withdrew his advertised cruise program for 1995. American Canada Caribbean Line, which operates on the Hudson River, Erie Canal, St. Lawrence River route deployed one of its vessels on a Great Lakes schedule for the

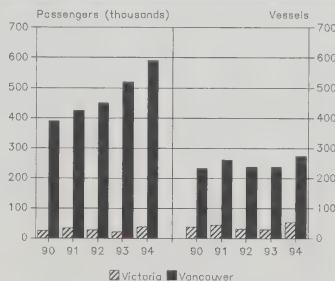
summer, cruising from Montreal to Chicago via Upper Canada Village, Kingston, Toronto, Erie, Sandusky, Mackinac Island, Holland and Manistee, Michigan.

The growth of the cruise industry on the east coast and the Great Lakes has been somewhat inhibited by laws restricting the operation of gaming facilities in Canadian waters. Some U.S. states are changing their laws to allow gambling on ships, thereby creating an advantage over Canadian cruises.

Operations

1994 was a banner year for the cruise industry at Canadian ports. Vancouver showed a continued increase in both cruise passengers and vessel calls recorded at the port. The number of passengers in 1994 reached 591,160 — a 14 per cent increase over 1993. Vessel calls increased by 16 per cent to 274 with an average vessel capacity per call of 1185.

Figure 7.27
Cruise Passengers and Vessels Calls
Vancouver and Victoria, 1990-1994



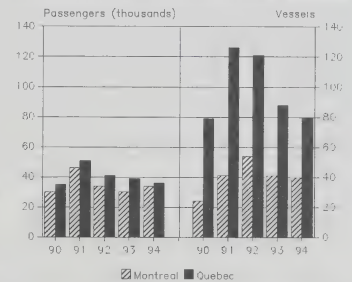
Source: Port of Vancouver and Westcan Terminals, Victoria - Excludes Pocket Cruise

Victoria's deep harbour received 52 luxury vessels this year, almost double the number in 1993,

accompanied by a 78 per cent increase in passenger counts to 38,127. The average vessel capacity per call was 854. Four pocket cruise vessels made 26 calls at the inner harbour in 1994, carrying a total of 1,817 passengers.

The Port of Quebec showed an overall nine per cent decrease in vessel calls with a six per cent drop in passengers in 1994. The decline occurred in the luxury cruise market, where vessel calls were down 14 per cent and passengers off by seven per cent. Pocket cruise statistics showed a seven per cent increase in passenger counts with the number of vessel calls unchanged.

Figure 7.28
Cruise Passengers and Vessels Calls
Quebec City and Montreal, 1990-1994



Source: Ports of Quebec City and Montreal

The Port of Montreal received calls from one pocket cruise vessel in addition to the luxury cruiseships while the other pocket cruises called into the Old Port. Although vessel calls at the Port of Montreal declined by one in 1994, there was an increase of 11 per cent in passengers over 1993. The average vessel capacity per call for luxury cruises was 766 at Quebec City and 736 at Montreal.

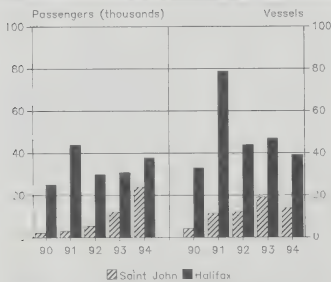
Halifax saw a 22 per cent increase in passengers in 1994 reaching a total

Table 7.24
1994 Cruiselines at Canadian Ports - Vancouver and Victoria

Cruiseline	Fleet	Passenger Capacity	Calls in 1994	
			Vancouver	Victoria
Cunard Crown Cruises	1	820	9	2
Cunard Line	1	509	6	3
Holland America Line	5	1,114	21	1
		1,240	20	
		1,340	11	
		1,374	12	
		1,600	21	
Norwegian Cruise Line	1	1,350	19	
Princess Cruises	6	812	19	
		906	14	14
		1,470	20	1
		1,600	10	1
		1,900	10	
		1,900	11	1
Regency Cruises	2	650	11	2
		850	10	1
Royal Caribbean Cruise Line	2	882	13	14
		1,194	21	2
Royal Cruise Line	1	750	7	2
Seven Seas Cruise Line	1	188	1	1
World Explorer Cruises	1	554	8	7
Pocket Cruises:			n/a	
Alaska Sightseeing Cruise West	3	58		9
		92		1
		84		9
Clipper Cruise Lines	1	138		6
Discoverer Reederi GMBH	1	138		1

Source: Ports of Vancouver and Victoria

Figure 7.29
Cruise Passengers and Vessels Calls
Halifax and Saint John - 1990-1994



Source: Ports of Halifax and Saint John

of 37,717; vessel calls decreased by 17 per cent. Saint John 1994 passenger count of 23,629 is nearly double the number through the port in 1993. As with Halifax, this was accompanied by a decrease in the number of vessel calls. In 1991, Halifax had an extraordinarily large number of passengers and calls due to cruiseship repositioning that occurred during the Gulf War.

In 1994, Carnival Cruise Lines introduced the 2,400-passenger *M.V. Fascination* into the eastern

seaboard route, offering three-day cruises out of New York with calls at Saint John and Halifax. The large capacity of this vessel accounts for much of the increased passenger flow and reduced vessel calls at the latter ports, and boosts the average vessel capacity to 1,712 for Saint John and 1,099 for Halifax.

Table 7.25

1994 Cruiselines at Canadian Ports - Quebec City and Montreal

Cruiseline	Fleet	Passenger Capacity	Calls in 1994	
			Quebec City	Montreal
Crown Commodore Cruise Line	1	916	2	1
Crystal Cruises	1	980	4	2
Cunard Line	1	509	2	1
Deutsche Seereederei	1	540	2	1
Kloster Cruise	1	766	2	1
OdessaAmerica Cruises	1	650	12	11
Princess Cruises	1	1,260	4	2
Regency Cruises	1	816	16	7
Royal Cruise Line	1	740	4	2
Seabourn Cruise Line	1	212	1	1
Silversea Cruise Line	1	314	2	1
Pocket Cruises:				
American Canadian Caribbean Cruise Line	2	70	4	
		100	10	
Clipper Cruise Line	1	100	10	10
St. Lawrence Cruise Line	1	66	5	

Source: Ports of Quebec City and Montreal

Table 7.26

1994 Cruiselines at Canadian Ports - Halifax and Saint John

Cruiseline	Fleet	Passenger Capacity	Calls in 1994	
			Halifax	Saint John
Carnival Cruise Lines	1	2,400	7	7
Crystal Cruises	1	980	5	
Cunard Line	2	509	1	
		1,864	1	
Cunard Crown Cruise Line	1	916	1	
OdessaAmerica Cruise Line	1	650	2	
Phoenix	1	n/a	1	
Princess Cruises	1	1,260	4	4
Regency Cruises	1	816	9	
Royal Cruise Line	1	740	2	
Seabourn Cruise Line	1	212	3	
Silversea Cruises	1	314	1	1
Touristik Union	1	540	1	
Pocket Cruises:				
Clipper Cruise Line	1	100	1	1

Source: Ports of Halifax and Saint John

Competition

Vancouver has reaped the benefits of the U.S. *Passenger Vessel Act* which prohibits foreign-flagged vessels from carrying passengers between U.S. ports (i.e. embarking passengers at one U.S. port and disembarking them at another). As a result, Vancouver has become a convenient home port to non-U.S. flagged vessels that dominate the Alaska cruise industry, to the detriment of Washington State ports. A number of Alaska cruises operate out of Los Angeles and San Francisco, calling at Canadian ports enroute, but they circumvent the restrictions of the Act by ensuring that all passengers embark and disembark at the same port.

In 1994, U.S. Representative Jolene Unsoeld introduced a bill in Congress to modify the *Passenger Vessel Act* by allowing foreign-flagged vessels to carry passengers between two U.S. ports if they guarantee to build replacement U.S.-flagged vessels within three years.

The bill was designed to open up the cruise industry, particularly for Seattle, Tacoma and Bellingham, but it stalled in the Senate and died with the end of the congressional session. Although Ms. Unsoeld was subsequently defeated in her bid for re-election, her initiative with respect to the cruise industry is very much alive, as evidenced by the construction of a new multi-purpose cruiseship terminal in Seattle.

CruiseShip operations out of U.S. ports remain handicapped by the cabotage provisions of the U.S. Passenger Vessel Act.

In spite of the industry trend toward larger-capacity vessels, Vancouver cruiseship facilities are rapidly reaching their limits, with two berths in use at the Canada Place cruise terminal and two more at the refurbished Ballantyne Terminal. A

proposal was advanced for a "Seaport Centre" which would include a hotel and Las Vegas-style casino. This would have provided a multi-use facility, balancing off the seasonal nature of the cruise industry, but the idea was dropped after an unfavourable response by the provincial government.

Canada's cruise industry is actively promoted by a variety of associations, government agencies and tourist bureaus. The Pacific Rim Cruise Association, formed by the Vancouver Port Association, Tourism BC and Tourism Vancouver, hosts the highly successful "Ship to Shore" conference each year in Vancouver. The Cruise Industry Association of B.C. has a membership including ports such as Vancouver, Stewart and Port Hardy as well as companies involved in supplying produce, dairy goods, stevedoring services, repair services, tourist packages, medical services, chandlery, etc. The North West CruiseShip Association, based in Victoria, is an association of owners and operators of passenger ships engaged in cruising activity in Canada.

In the East, an association of ports including Halifax, Boston, Quebec City, Montreal, Saint John and other small Atlantic Canadian ports as well as the French islands of St. Pierre and Miquelon have been active in marketing the New Atlantic Frontier, in an effort to attract the cruise industry to east coast ports of call.

Table 7.27

New Atlantic Frontier Ports of Call Atlantic Canada & Quebec

Newfoundland - Labrador

Botwood
Corner Brook
Happy Valley-Goose Bay
Red Bay
St. Anthony
St. John's

Nova Scotia

Halifax
Lunenburg
Pictou
Shelburne
Sydney
Yarmouth

New Brunswick

Saint John

Quebec

Montreal
Quebec

Prince Edward Island

Charlottetown

Source: New Atlantic Frontier

FERRY SERVICES

Ferries in Canada provide an important transportation link for coastal and island communities as well as communities separated by rivers or lake crossings where bridges are not warranted. The demand for ferry services stems mainly from the needs of residents of these communities but in many cases, is tied to the tourist industry.

Structure

Ferry services in Canada vary widely in terms of ownership (small private operators to provincial governments and federal crown corporations), vessel types (small cable ferries to large cruise-type vessels) and operations (seasonal to year-round schedules, tariff-based versus no-charge usage). Terminal and docking facilities are variously owned/leased and operated by ferry compa-

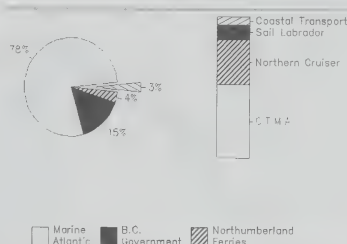
nies, municipalities, provincial and Federal governments or other private companies.

The Canadian Ferry Operators' Association membership represents about 90 per cent of the operating ferries in the country. Under the *Canadian Shipping Act*, passenger vessels with a capacity of more than 12 passengers or over five gross tons must obtain a "Certificate of Inspection" in order to operate, and submit regular Coast Guard inspections. Lack of any other reporting requirements makes it difficult to get information on the non-CFOA ferry services operating inter- and intra-provincially as well as internationally.

Some ferry services exist due to early constitutional arrangements, where the federal government is obliged to provide mainland ferry

links for British Columbia, Newfoundland and Prince Edward Island. Federal grants and subsidies are provided to offset operational costs on these routes, while other subsidies are paid for some services where no constitutional requirement exists, such as alternative intra-provincial routes or those to remote regions.

Figure 7.30
Federal Funds (Subsidies and Grants) for Ferry Operations, 1994-1995



Source: Canadian Coast Guard

Marine Atlantic, a federal crown corporation on the east coast, accounts for some 78 per cent of the federal government's annual funding for ferry operations. Its operations include six auto-ferry services linking the Atlantic provinces as well as Maine, together with a Labrador coastal service carrying passengers and cargo between Lewisporte, Newfoundland and Nain, Labrador. During the past two years, Marine Atlantic has been able to offset excess capacity on this service by marketing "Coastal Labrador Adventure Cruises" as tourist packages.

Coastal Transport, a subsidiary of Marine Atlantic, operates under provincial government contract in New Brunswick between Blacks Harbour and Grand Manan Island. This operation is supported by a

Table 7.28

Canadian Ferry Operators Association (CFOA)

British Columbia

British Columbia Ferry Corporation
Ministry of Transportation and Highways

Northwest Territories

Department of Transportation

Manitoba

Department of Transportation & Highways

Ontario

Ministry of Transportation
Owen Sound Transportation Company

Quebec

Ministry of Transportation
Gestion C.T.M.A.
Société des traversiers du Québec
Traverse Rivière-du-Loup/ Saint-Siméon Ltee

Prince Edward Island

Northumberland Ferries Ltd.

New Brunswick

Marine Atlantic
Coastal Transport

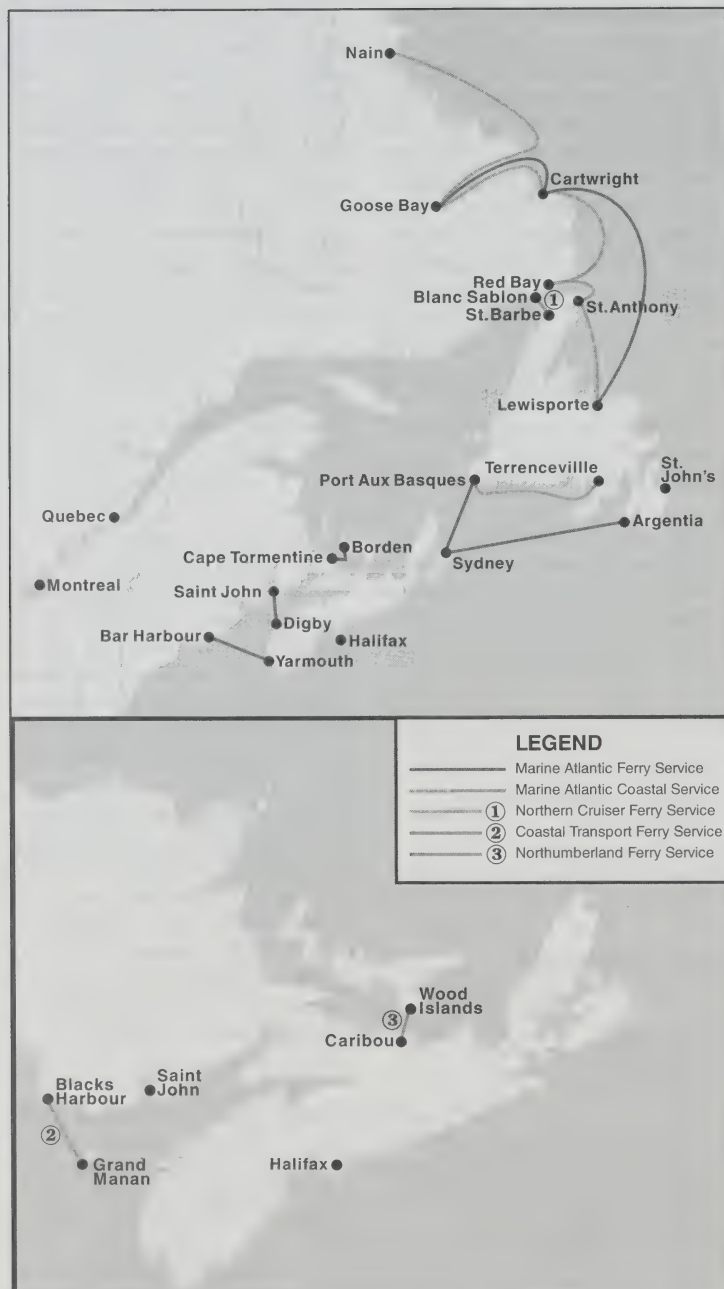
Newfoundland and Labrador

Department of Works and Service Transportation
Northern Cruiser Ltd.

Source: CFOA Annual Report

Figure 7.31

East Coast Ferries



yearly subsidy from the federal government of \$259,000.

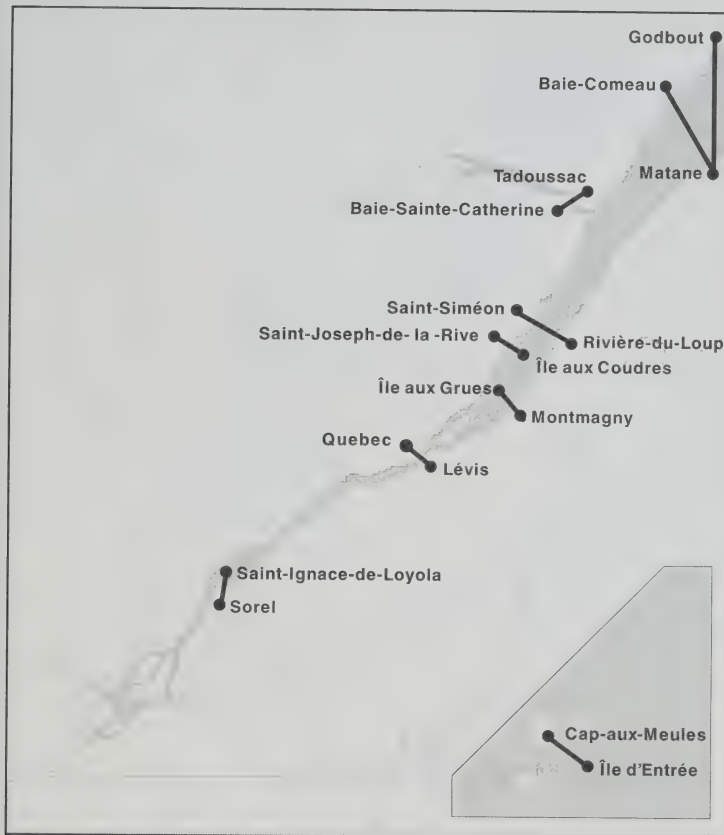
Northern Cruiser operates a single passenger/vehicle ferry under contract with the federal government between St. Barbe, Newfoundland and Blanc Sablon, Quebec during the May to January season. Another federally-funded operation is Northumberland Ferries Limited, linking Wood Islands, P.E.I. and Caribou N.S. Sail Labrador, a small passenger/cargo vessel operator, carries 2,500 passengers per year and receives a federal subsidy of about \$500,000. Newfoundland and Labrador's Department of Works, Services and Transportation operates nine year-round intra-provincial services.

A walk-on passenger ferry service joining Cape Breton to Îles-de-la-Madeleine was introduced in July, 1994 as a tourism project funded by the Nova Scotia Department of Economic Renewal and the Atlantic Canada Opportunities Agency.

Quebec's Ministry of Transportation subsidizes the Société des traversiers du Québec (STQ) which operates a total of seven services across the St. Lawrence River, two of which are contracted out to private operators. In 1993, the service operated by La Traversée Rivière-du-Loup/Saint-Siméon Limitée came under STQ control. An additional service incorporated by the STQ in 1993 is the Îles-de-la-Madeleine route between Cap-aux-Meules and Île d'Entrée. Six of these routes operate year-round and five charge fares. The Ministry operates two additional routes on contract: a free passenger ferry across the Rivière St. Augustin and a cargo ferry service Desserte

Figure 7.32

St. Lawrence River Ferries



Cheveny/Horrington Harbour/Aylmer Sound which charges on a tonnage basis.

Coopérative de Transport Maritime et Aérien (CTMA) receives both federal and provincial subsidies to operate a passenger/vehicle ferry between Îles-de-la-Madeleine, Quebec and Souris, P.E.I. as well as passenger/cargo service between Cap-aux-Meules, Montreal, and Matane. In 1994, CTMA turned its attention toward the replacement of the 30-year old *Lucy Maud Montgomery* on the Îles-de-la-

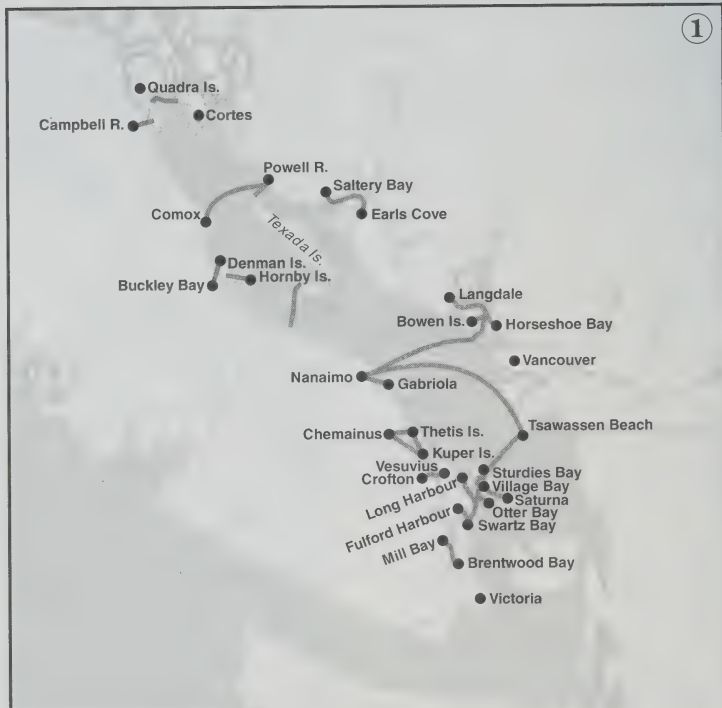
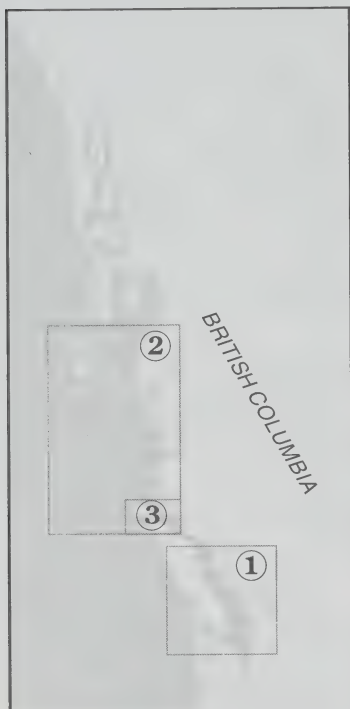
Madeleine route, and secured a federal government commitment of \$30 million. The Quebec government has proposed that the CTMA purchase the *Camille-Marcoux* from the STQ, which would then replace this vessel with \$40 million of provincial assistance to cover necessary upgrades to the *Camille-Marcoux* and building of a replacement ship for the STQ; this latter contract would be directed to the financially troubled MIL Davie shipyard in Quebec.

The Ontario Ministry of Transportation is responsible for ferry services on the Great Lakes-St. Lawrence Seaway system, either through direct operation or subsidization. Fare structures vary from route to route, with some services provided free of charge. Pelee Island Transportation Services and its Leamington/Kingsville-Pelee Island and Pelee Island-Sandusky, Ohio routes are operated for the provincial government by the Owen Sound Transportation Company (a wholly-owned subsidiary of Ontario Northland Transportation Commission). This company also operates the very popular seasonal ferry which runs from Tobermory to Manitoulin Island in Lake Huron.

The Manitoba Highways and Transportation department offers services on six routes and the Northwest Territories Transportation department operates five. No tariffs are charged on any of these seasonal services.

The British Columbia government receives a federal grant for the provision of ferry services in coastal waters, which is used to fund the British Columbia Ferry Corporation (B.C. Ferries). This provincial crown corporation is one of the world's largest ferry operators, with 41 vessels on 24 routes. These routes can be divided into groups serving Vancouver Island — Mainland, Sunshine Coast, Southern Gulf Islands, Northern Gulf Islands, North Coast, and Langdale-Gambier-Keats Island. B.C. Ferries also provides service on nine routes to remote coastal communities through private sector contracts. The vessels in service are tailored to

Figure 7.33

British Columbia Ferries**Routes**

- ① Mainland-Vancouver Island, Sunshine Coast, Southern Gulf Islands and Northern Gulf Islands
- ② Northern Coast
- ③ Northern Gulf Islands



individual route requirements, and range from a basic 32-passenger ferry to large, 2100-passenger full service ships. All but two of these vessels were built in Canadian shipyards, mostly in Victoria. Fares are charged on all routes, and substantial revenues are earned from tourism, particularly the Mainland-Vancouver routes and those along the Inside Passage. In March, 1994, the new vessel *Spirit of Vancouver Island* with capacity for 2,100 passengers and 470 cars, entered service on the Mainland-Vancouver Island route.

An \$800 million overhaul of B.C.

Ferries was announced in 1994.

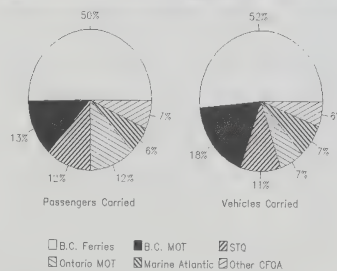
Over the next ten years, the corporation will undergo a major overhaul which will include terminal construction and upgrades, two new replacement ferries and three fast ferries to operate between Horseshoe Bay and Nanaimo. New faster ferries will allow a 50 per cent increase in scheduled sailings and alleviate the problem of peak period delays. Also in 1994, the B.C. Government created the Victoria Line to operate a single vessel on seasonal service between Victoria and Seattle.

Inland ferry operations in B.C. are handled by the Ministry of Transportation and Highways (MOT). Its subsidized service on Shuswap Lake is the only route on which it charges fares.

Operations

Current figures are not yet available for all CFOA members; however, the relative size of their operations is evident in the traffic figures for 1993. B.C. Ferries, by far the largest operator in Canada, carried over 20 million passengers and eight million vehicles. B.C. Ministry of Transportation & Highways was next with over five million passengers and 2.5 million vehicles. Both the Ontario Ministry of Transport and Société des traversiers du Québec carried over 4.5 million passengers and one million vehicles while Marine Atlantic carried about 2.5 million passengers and with a vehicle count just over 1.1 million. The remaining CFOA members accounted for 2.7 million passengers and 890,000 vehicle crossings.

Figure 7.34
1993 CFOA Traffic



Source: Ferry Operators and CFOA Annual Report

B.C. Ferry Corporation has shown consistent but modest yearly increases in the numbers of passengers and vehicles carried. 1994 was a banner year with a four per cent increase in passengers to reach 21,155,623 and a two per cent increase in vehicles to 8,044,220. The highly profitable routes between the mainland and Vancouver Island and on the Sunshine Coast do not

offset the losses on the other routes. Current fiscal and economic conditions have prompted a closer examination of each ferry service, assessing the efficiency of its operation and balancing the subsidy cost against the necessity for the service.

Ferry operators experienced substantial traffic growth in 1994.

Victoria Lines surpassed expectations in its first year of operation with an estimated 83,000 passengers and 23,000 vehicles carried in 1994. This produced an additional 33,000 visitors to Vancouver Island as well as generating some \$8 million of economic activity through the associated tourist spending.

After achieving a four per cent increase in both vehicles and passengers carried in 1993, Marine Atlantic showed a similar increase in vehicles in 1994 with a more modest one per cent growth in passengers. Summer service between Yarmouth and Bar Harbour, Maine was extended and six round-trip crossings were added to the P.E.I. service as a result of rising demand. On the other hand, Argentia summer service was shortened by six weeks due to low traffic levels, and some morning departures were trimmed from the North Sydney-Port Aux Basques service. Residents of isolated communities along the south coast of Newfoundland expressed serious concern over reduced levels of ferry service, prompting the provincial government to investigate

the feasibility of taking over certain Marine Atlantic services and integrating them with their own operations. Marine Atlantic's operation between Cape Tormentine, N.S. and Borden, P.E.I. will become obsolete with the completion of the bridge and causeway spanning the Northumberland Strait in 1997. This will free up three ferries built specifically for the conditions encountered on this route.

Marine Atlantic was given some prominence in the federal government's commercialization/privatization initiatives, and there was some controversy over the revelation that three of the crown corporation's vessels were foreign-flagged. However, it was soon clarified that the vessels in question were foreign-registered when they were purchased by Marine Atlantic, who had subsequently chosen not to re-register them due to the substantial costs involved.

Northumberland Ferries experienced 20 per cent growth in the number of passengers and vehicles carried between P.E.I. and Nova Scotia in 1994 together with corresponding increases in line-ups and delays.

Traverse Rivière-du-Loup/Saint-Siméon Ltée achieved a seven per cent vehicle and six per cent passenger increase in 1994, while Gestion CTMA increased vehicle traffic by five per cent to 25,717 and passengers carried by four per cent to 62,306.

NORTHERN MARINE RESUPPLY SERVICES

There are five distinct marine systems involved in the resupply of northern Canadian communities.

Lake Athabasca

The Athabasca marine resupply system consists of seasonal barge services to communities located along the eastern (Saskatchewan) and western (Alberta) shores of Lake Athabasca. A. Frame Contracting Ltd. is the principal carrier, serving all points in the Athabasca system from a base at Fort MacMurray. The carrier's fleet consists of one tug, seven barges and one self-propelled barge, and includes equipment for dredging. MacDonald Marine Transport Ltd. operates a smaller fleet of one tug and two barges out of Shell Landing (Fort McKay), and both carriers offer service to Fort Chipewyan and points on the eastern shores of Lake Athabasca. Trips are scheduled as sufficient loads are booked. Lake Athabasca Transport (LAT) provides unscheduled service with a small fleet based in Fort Chipewyan, but serves only Alberta points on the Athabasca, Slave and Peace Rivers. A. Girard Enterprises operates a scheduled weekly small-capacity barge service between Shell Landing and Fort Chipewyan, with roadway connections through an operating alliance with Grimshaw Trucking. Girard's self-propelled barge is not large enough to require a resupply licence, but the company has recently applied for such a licence which will enable it to expand operations with the addition of a 200-ton barge.

A large proportion of bulk fuel shipments now moves over winter roads.

Communities on the eastern shores of the lake tend to stockpile fuel and resupply goods during the May through October barging season; however, at Fort Chipewyan, the same stockpiling takes place between December and March, shipping over the winter road to take advantage of lower trucking rates. Fuel storage facilities at Fort Chipewyan can hold one million litres of furnace fuel and 600,000 litres of gasoline. During the remaining months, air service provided by Contact Airways is the only choice for resupply shipments. Efforts to promote the construction of all-weather access roads to Fort Chipewyan and/or Stony Rapids continue to be stymied by funding difficulties.

Figure 7.35
Athabasca



The total volume of bulk fuel and community resupply cargo moved by licenced carriers in the system in 1994 was about 8,800 tonnes. This represented a drop of some ten per cent from 1993. A. Frame made five

trips across the lake during the May to October navigating season, operating about once per month. Lake Athabasca Transport made nine trips, seven of which were between Fort McMurray and Fort Chipewyan. Several LAT loads were transshipped to MacDonald Marine for delivery to points on the lake. Girard's service sailed from Fort Chipewyan each Monday and returned on Wednesdays. Three of the four carriers indicated that their rates had not changed in 1994.

Mackenzie River/ western Arctic

The Mackenzie River and western Arctic system is comprised of seasonal tug and barge services to communities along the 1,750-kilometer length of the Mackenzie River to Tuktoyaktuk, west along the north slope of Alaska, and east another 1,820 kilometers along the lower Arctic islands to Taloyoak (formerly Spence Bay). About 120,000 tonnes of bulk fuel and community resupply goods were carried in the system in 1994, supplemented by additional tonnages of non-regulated cargo.

Bulk fuel makes up over 80 per cent of the regulated traffic, since much of the deck cargo formerly moved by barge now travels by truck over the Dempster Highway and other all-weather and winter roads along the Mackenzie valley. Inuvik, Norman Wells, and Cambridge Bay have regular combi-jet service which provides substantial capacity, although at premium prices.

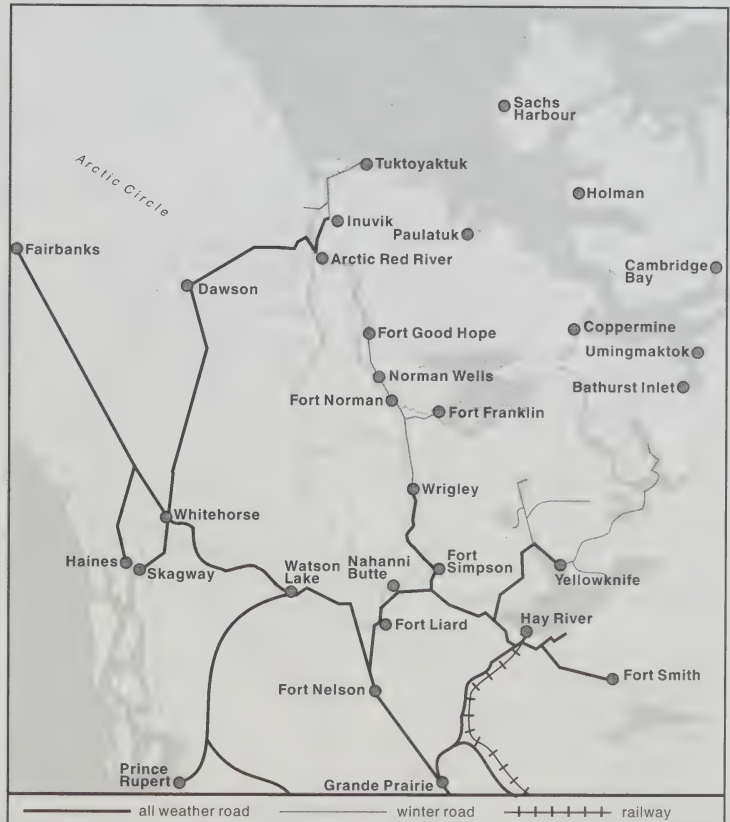
Northern Transportation Company Limited (NTCL) is, by far, the largest carrier in the system, operating a fleet of 15 tugs and

***Tug and barge remains
the most viable option
for moving bulk fuel
and heavy cargoes in
the Mackenzie
River/western Arctic
system.***

134 barges and providing scheduled service to 24 communities out of its main base at the railhead in Hay River. NTCL is also linked to

Grimshaw Trucking and Distributing Ltd. which operates in Alberta, British Columbia and the Northwest Territories. Excluding its main staging and transshipment points at Hay River, Norman Wells, Inuvik and Tuktoyaktuk, the carrier made a total of 55 calls in 1994, including 16 to points on Great Slave Lake, 19 to Mackenzie River settlements, five in the Mackenzie delta, and 15 to communities in the western Arctic. There were no increases in tariffs during the year.

Figure 7.36
Mackenzie River and Western Arctic



NTCL has also developed substantial new business supplying points along the north slope of Alaska. The company purchased two ice-class tugs, the Canmar Suppliers III and IV, for deployment in Arctic barging operations as far east as Taloyoak (formerly Spence Bay) and west as far as Point Hope.

Cooper Barging Service Ltd. provided unscheduled resupply service with its smaller fleet of two tugs and five barges. Excluding its base of operations at Fort Simpson, Cooper made 15 calls to points between Jean Marie River and Fort Good Hope. More than half of these calls were made to Norman Wells and included an experimental refrigerated container service. Additional calls were made at Nahanni Butte and Fort Liard on the Liard River.

Coastal Marine Ltd. of Inuvik operated four trips to Tuktoyaktuk with its single tug and barge, forwarding cargo trucked in over the Dempster Highway by its sister company, Points North Transportation Inc. Beluga Transportation Ltd., the other small licensed carrier, did not operate in 1994.

Inside Passage and Yukon

This system consists of marine resupply services from Seattle and Vancouver via the inside channel to Skagway and Haines, Alaska and thereon by pipeline/truck to destinations in the Yukon, Alaska and the Northwest Territories. The great majority of traffic goes to points in the southern Yukon; however, recent trends show a decline in project-related cargoes with the closure of mining

operations at Faro and Watson Lake, and a corresponding drop in community resupply shipments.

In 1993, the total tonnage moved to Yukon destinations via the inside passage was just over 100,000 tonnes, of which bulk fuel represented about 80 per cent. The White Pass and Yukon company ships bulk fuel by tanker barges from the Chevron refinery in Vancouver to Skagway and by pipeline from Skagway to Whitehorse. Other bulk fuel is sourced from U.S. refineries and barged to the Totem marine terminal facilities at Haines. Distribution from these points is handled by truck. Although data were not yet available for 1994,

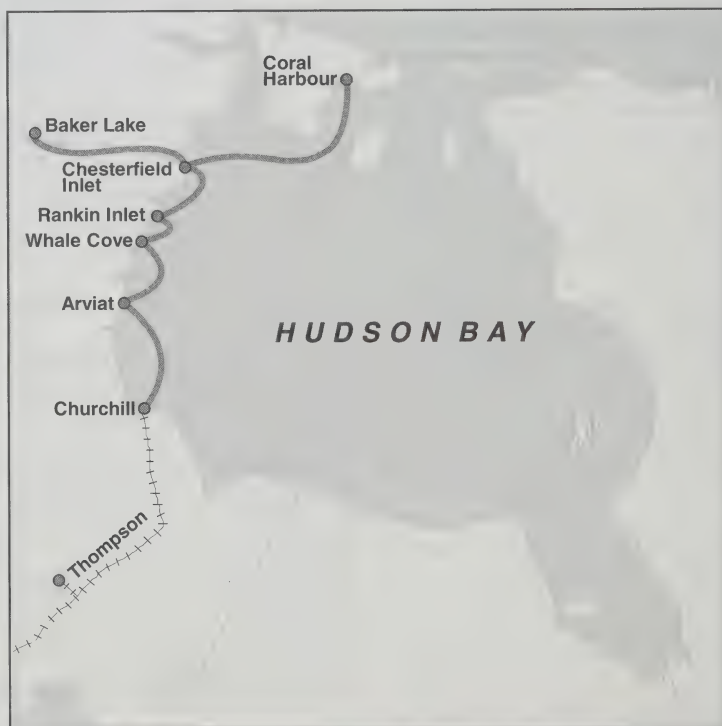
volumes of bulk fuel shipped via the Inside Passage were likely down substantially due to a trend toward sourcing from refineries at Edmonton. Alaska Marine Lines provides the only scheduled general cargo service, operating a tug-and-barge service out of Seattle and connecting with trucking services at Skagway and other points in southern Alaska.

Keewatin/Hudson Bay

The Keewatin/Hudson Bay system provides seasonal resupply services to six communities on the shores of Hudson Bay. Northern Transportation Company Limited is the major operator, with a fleet of one tug and

Figure 7.37

Hudson Bay



four barges based at Churchill, Manitoba. There is some limited competition from marine carriers out of Montreal, and one community, Rankin Inlet, has regular combi-jet service.

Bulk fuel represents about three-quarters of the traffic carried in the system, the remainder being dry cargo. The fuel is shipped to Churchill by rail and stored at a tank farm managed by Imperial Oil under contract to the Government of the Northwest Territories; from here it is distributed to the six Keewatin communities, with almost half going to Rankin Inlet.

NTCL opened a regional office in Rankin Inlet in 1994 and restructured its tariff to incorporate commodity- and distance-based rates. The tariff modifications had the overall effect of lowering charges and the company carried a record volume in the 1994 season in excess of 30,000 tonnes.

Eastern Arctic

The annual Eastern Arctic Sealift provides resupply services to points on the Labrador coast, in Hudson Strait, east Baffin, Foxe Basin, the mid- and high-Arctic, and Greenland. The Sealift is coordinated by the Canadian Coast Guard-Northern, which contracts with commercial cargo vessels and tankers to transport dry cargo from its main marshalling base in Montreal and bulk fuel from northern distribution points. The Coast Guard tendering process is open to all Canadian ship operators, and does not preclude either successful or unsuccessful bidders from making private arrangements

with Sealift customers. Other non-scheduled commercial shipping services are available out of east coast ports, and some communities — Iqaluit, Nanisivik, and Resolute — have regular combi-jet service.

In 1994, the Sealift involved contracts with four commercial shipowners (Transport Desgagnés Inc., C.A. Crosbie Shipping Ltd., Transport Igloodik Inc. and Fednav International Ltd.) and one tanker company (Socanav Inc.). A total of

Figure 7.38

Eastern Arctic Sealift



Outsourcing of bulk fuel supply has reduced overall Sealift volume, but shipments of dry cargo remain stable.

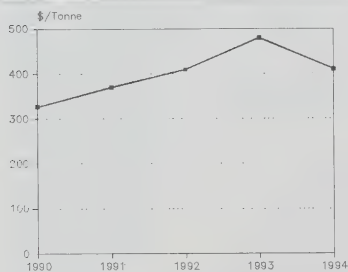
seven dry cargo ships and one tanker were utilized, making a total of 15 sailings during the July to October period. All of the vessels

were Canadian-registered and manned.

shipped exclusively for the U.S. Air Force.

Dry cargo deliveries were made to 27 communities, including four North Warning System (NWS) sites. Bulk fuel was also delivered by tanker to these latter four sites and by Coast Guard icebreakers *Earl Grey*, *Des Groseilliers* and *Pierre Radisson* to the remote points of Eureka and Pelly Bay. Eleven other eastern Arctic communities were supplied with bulk fuel by European tankers under separate contract (a three-year agreement, 1993-95) with the Government of the Northwest Territories.

Figure 7.39
Eastern Arctic Sealift
Average Annual Dry Cargo Rates



Source: Transport Canada

Total volume shipped in 1994 was 11,910 tonnes of dry cargo and 4,890 tonnes of bulk petroleum products, representing only a marginal decrease in dry cargo but a drop of over 40 per cent in bulk fuel from 1993. Over half of the dry cargo was shipped by commercial enterprises, with NWT government agencies accounting for another 30 per cent. The rest was split among federal government departments, the U.S. Air Force, northern municipalities and private individuals. The bulk fuel was

APPENDIX A.1: Sources of Information Used in the Review

• List of Government Departments and Agencies

- Statistics Canada
- Transport Canada
- Natural Resources Canada
- Industry Canada
- Human Resources Development Canada
- Canada Ports Corporation
- Finance Canada
- Bank of Canada
- Transportation Safety Board of Canada
- Provincial/Territorial Transport Boards
- St. Lawrence Seaway Authority

• Other

The Agency also obtained information from:

- Carriers
- the Conference Board of Canada
- Canada's major financial institutions
- Canadian Shipowners Association
- Canadian Trucking Association
- Canadian Ports
- Harbour Commissions
- North West CruiseShip Association
- Cruise Industry Association of B.C.
- Tourism B.C.
- Pacific Rim Cruise Association
- Canadian Ferry Operators' Association

and three private U.S. sources of information:

- the Official Airline Guides
- the Airline Tariff Publishing Company
- the Journal of Commerce's PIERS (Port Import/Export Reporting Service)

APPENDIX A.2: Agency's 1994 Survey Program

• Shippers Survey

Supported by the following Associations:

Association of International Automobile Manufacturers of Canada
 Association québécoise de la distribution de fruits et légumes
 Canadian Chemical Producers Association
 Canadian Exporters' Association
 Canadian Fertilizer Institute
 Canadian Horticultural Council
 Canadian Importers' Association
 Canadian Industrial Transportation League
 Canadian Manufacturers' Association
 Canadian National Millers' Association
 Canadian Petroleum Products Institute
 Canadian Plywood Association
 Canadian Produce Marketing Association
 Canadian Pulp and Paper Association
 Canadian Shippers' Council
 Cariboo Lumber Manufacturers' Association
 Coal Association of Canada
 Coast Forest and Lumber Association
 Council of Forest Industries
 Council of Forest Industries Pulp and Paper Sector
 Interior Lumber Manufacturers' Association
 Mining Association of Canada
 Motor Vehicle Manufacturers' Association
 Northern Forest Products Association
 Propane Gas Association of Canada Inc.
 Quebec Food Processors Association
 Quebec Lumber Manufacturers' Association
 Quebec Mining Association
 Retail Council of Canada
 Sultran

• Air Surveys

- Canadian Professional Sales Association
 - North West Commercial Travellers' Association
 - Northern Air Survey
- Representatives of communities,
 Native organizations and bands located in northern Canada

- **Marine Surveys**

- **Northern Marine Survey** supported by:
 - Arctic cooperatives,
 - Canadian Coast Guard,
 - Federal, provincial and territorial governments,
 - Indian bands,
 - N.W.T. Association of Municipalities
 - Northern businesses,
 - Officials from northern communities.
- **Port Terminal Operators** endorsed by:
 - The Canada Ports Corporation,
 - Transport Canada's Public Ports and Harbours Directorate.
- **Shipping Conferences**

- **International Freight Forwarders supported by:**

The Canadian International Freight Forwarders Association.

- **Motor Carrier Interview Program supported by:**

Motor carriers
Officials from provincial, regional and national trucking associations
Provincial licensing boards
Provincial transportation ministries
Canadian Council of Motor Transport Administrators

Sample Size and Returns

	Sample Size	Returns Total
Shippers Survey	3,417	561
Canadian Professional Sales Association (CPSA) Survey	3,463	856
The North West Commercial Travellers Association Survey	1,395	395
Northern Air Survey	795	120
Shipping Conferences Survey	26	15
Freight Forwarders Survey	194	37
Northern Marine Survey	435	62
Port Terminal Operators Survey	221	61
Motor Carrier Interviews	126	98

Regional Distribution of Survey Responses

	Shippers Survey %	CPSA Survey %	North West CTA Survey %	Northern Air Survey %	Motor Carrier Interviews %
Newfoundland	2.9	1.2	0.5	5.0	4.1
Prince Edward Island	1.4	0.1	—	—	2.1
Nova Scotia	5.2	3.0	9.9	—	9.2
New Brunswick	5.2	1.2	3.8	—	9.2
Quebec	19.6	30.4	8.9	7.6	22.4
Ontario	29.9	43.7	11.3	4.2	16.3
Manitoba	6.9	1.0	20.7	8.4	6.1
Saskatchewan	4.4	3.7	4.8	5.9	6.1
Alberta	10.9	5.1	18.3	10.9	13.3
British Columbia	12.2	10.6	21.8	4.2	11.2
Yukon Territory	0.7	—	—	2.5	—
Northwest Territories	0.7	—	—	51.3	—

APPENDIX A.3: 1994 Motor Carrier Survey

Changes in Truck Traffic Reported in 1994 by Carriers, by Market Segment (%)

	Domestic		International		Specialty Services
	TL	LTL	TL	LTL	
Increase					
40% +	—	8	7	23	6
30-39%	1	2	12	3	—
20-29%	14	6	8	3	10
10-19%	22	25	28	17	15
5-9%	19	25	15	13	12
1-4%	5	13	7	10	12
No change	19	15	5	20	33
Decrease					
1-4%	1	4	5	7	8
5-9%	8	—	—	—	2
10-19%	1	2	2	—	2
20-29%	3	—	—	—	—
30-39%	—	—	2	—	—
40% +	1	—	5	—	—
No response	4	—	2	3	2
<i>% Reporting Increase</i>	66	79	78	70	56
<i>% Reporting Decrease</i>	14	6	13	10	12

Changes in Truck Operating Revenues by Market Segment 1993-94 (%)

	Domestic		International U.S.	
	TL	LTL	TL	LTL
Increase				
40% +	1	6	6	18
30-39%	4	6	4	4
20-29%	6	2	4	4
10-19%	25	26	29	25
5-9%	14	15	19	7
1-4%	14	12	15	14
No range specified	2	3	2	4
No Change	16	15	8	21
Decrease				
1-4%	1	3	6	—
5-9%	8	3	—	—
10-19%	1	—	2	—
20-29%	1	2	2	—
30-39%	1	3	—	—
40% +	1	3	—	—
No range specified	—	3	—	—

APPENDIX A.4: 1994 Shippers Survey

General Information

Number of Employees in Canadian Operations

	Size of Firm				
	1-49	50-99	100-499	500-999	1,000 +
Responses	186	93	154	46	70

Number of Facilities Operated

Area	Estimated No. of Facilities
Newfoundland	57
Prince Edward Island	37
Nova Scotia	207
New Brunswick	172
Quebec	945
Ontario	1,560
Manitoba	282
Saskatchewan	227
Alberta	634
British Columbia	729
Yukon	10
Northwest Territories	11
Canada Total	4,871
United States	572
Mexico	16
Other Countries	278

Major Industry Sectors

Industry Sectors	Responses
Mining	23
Food	82
Plastic	32
Wood	52
Paper	32
Fabricated Metal	66
Machinery	22
Electrical	37
Chemical	55
Wholesale Trade	60
Retail Trade	44
Agricultural	49

Transportation Freight Bill in 1994 (Thousands of Dollars)

Responses by Mode	Less than 200	200-1,000	1,000-10,000	10,000-100,000	100,000 and over
Rail Intermodal	91	33	23	3	0
Rail Carload	58	31	44	34	4
Truckload	185	115	112	25	5
Less-than-truckload	246	99	41	5	1
Marine Containerized	135	50	24	4	1
Marine Other General Cargo	59	8	11	8	0
Marine Bulk	29	13	16	11	0
Air Freight	202	36	10	0	1

Importance of Domestic Traffic to Shippers

Mode	Total Resp.	Percentage of Domestic Traffic in Shipper's Modal Traffic					
		0%	1-20%	21-40%	41-60%	61-80%	81-100%
Rail	100%	13	24	12	9	5	37
Truck	100%	3	14	12	16	18	37
Marine	100%	84	8	1	1	0	6
Air	100%	29	36	11	7	7	10

Importance of Canada-U.S. Traffic to Shippers

Mode	Total Resp.	Percentage of Canada-U.S. Traffic in Shipper's Modal Traffic					
		0%	1-20%	21-40%	41-60%	61-80%	81-100%
Rail	100%	38	19	8	11	9	15
Truck	100%	19	29	16	14	10	12
Marine	100%	90	6	0	1	1	2
Air	100%	28	32	16	9	7	8

Importance of Other International Traffic to Shippers

Percentage of Other International Traffic in Shipper's Modal Traffic

Mode	Total Resp.	0%	1-20%	21-40%	41-60%	61-80%	81-100%
Rail	100%	89	9	1	0	0	1
Truck	100%	83	15	1	0	0	1
Marine	100%	11	17	4	3	3	62
Air	100%	42	26	7	7	5	13

Rail Transport

Rail Access of Shippers' Facilities

Province	Total Facilities on Rail	Direct Access to Two or More Railways	Direct Access to One Railway	Within 30 Km. of Interchange	Beyond 30 Km. of Interchange
Nova Scotia	22	8	14	7	7
New Brunswick	23	6	17	5	12
Quebec	171	73	98	69	29
Ontario	188	79	109	97	12
Manitoba	35	9	26	14	12
Saskatchewan	33	19	14	10	4
Alberta	101	26	75	35	40
British Columbia	117	24	93	37	56

Shippers' Ratings of Service Factors

Service Factors	In 1994		1994 versus 1993		
	Satisfactory	Unsatisfactory	Better	Same	Worse
RAIL INTERMODAL	<i>% of respondents</i>		<i>% of respondents</i>		
Equipment Supply	86	14	14	77	9
Equipment Condition	98	2	11	85	4
Service Frequency	89	11	13	83	4
Service Reliability	77	23	17	70	13
Transit Time	79	21	16	79	5
Claims Handling	86	14	5	95	0
Cooperation with Other Railways	90	10	11	89	0
Shipment Tracing	92	8	11	88	1
Product Care/Cargo Handling	94	6	12	88	0
Overall Quality of Service	91	9	17	78	5
RAIL CARLOAD					
Equipment Supply	72	28	7	67	26
Equipment Condition	84	16	4	84	12
Service Frequency	77	23	7	80	13
Service Reliability	66	34	11	68	21
Transit Time	66	34	11	72	17
Claims Handling	83	17	5	90	5
Cooperation with Other Railways	72	28	4	89	7
Shipment Tracing	86	14	13	83	4
Switching Service	80	20	6	86	8
Product Care/Cargo Handling	86	14	4	91	5
Overall Quality of Service	71	29	7	76	17

Changes in Railway Freight Rates Reported by Shippers

	Rail Intermodal		Rail Carload	
	Domestic	Transborder	Domestic	Transborder
Increases (No. of shippers)	44	25	66	43
Average Increase	3.33%	3.32%	3.61%	3.34%
Decreases (No. of shippers)	10	5	15	12
Average Decrease	3.30%	5.00%	5.47%	3.17%
No Change (No. of shippers)	52	26	46	35
Average Change	+1.07%	+1.04%	+1.23%	+1.17%

Shippers' Ratings of Railway Willingness to Compete

Railway Carriers	In 1994		1994 versus 1993		
	Interested	Not Interested	More Interested	No Change	Less Interested
RAIL INTERMODAL	<i>% of respondents</i>		<i>% of respondents</i>		
Canadian Railways	59	41	22	66	12
U.S. Railways	69	31	28	67	5
RAIL CARLOAD					
Canadian Railways	55	45	19	76	5
U.S. Railways	72	28	28	65	7

Trucking Services

Types of Services and Motor Carriers Used by Shippers in 1994

		Truckload			Less-than-truckload		
		Intra-provincial	Extra-provincial Domestic	Canada - U.S. and Mexico	Local Intra-provincial	Extra-provincial Domestic	Canada - U.S. and Mexico
For-hire Carriers	Canadian-based carriers	56%	50%	42%	57%	50%	34%
	U.S.- Based Carriers			30%			25%
Private Carriers	Used own fleet to move own goods	26%	11%	9%	20%	7%	4%
	Used services of a private carrier operating as a for-hire carrier	21%	14%	15%	16%	11%	10%

Note: Based on 551 respondents

Volume of Freight Shipped by Truck - Changes Reported by Shippers

Change in Volume of Freight Moved by Truck	1988	1989	1990	1991	1992	1993		1994	
						TL	LTL	TL	LTL
						% of responding shippers			
Increase	38	30	24	21	31	29	24	55	48
No Change	56	63	61	61	49	58	65	38	41
Decrease	6	7	15	18	20	14	11	7	11

Shippers' Reactions to a Proposed Increase in Trucking Rates 1990-1994

	Truckload					LTL				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
<i>% of shippers responding¹</i>										
Successfully negotiated a reduction in the increase	50	56	60	55	40	45	51	55	55	40
Adjusted the price of goods accordingly	17	13	12	12	11	17	15	10	11	11
Absorbed the increase	33	24	22	20	19	39	34	28	26	19
Switched to other trucking firm	31	33	34	34	25	25	30	31	36	25
Switched to other mode of transport	5	4	3	8	2	3	2	2	4	2

¹Shippers could give more than one response to the question.

Shippers' Reactions to a Proposed Increase in Trucking Rates by Size of Shipper Freight Bill - 1994 vs 1993 — Truckload

Annual Freight Bill	Truckload					
	Under \$1M		\$1- \$10M		Over \$10M	
	1993	1994	1993	1994	1993	1994
<i>% of responding shippers¹</i>						
Successfully negotiated a reduction in the increase	38	37	67	50	66	52
Adjusted the price of goods accordingly	15	13	6	8	13	0
Absorbed the increase	18	19	21	15	21	11
Switched to other trucking firm	45	27	27	20	27	26
Switched to other mode of transport	6	2	7	5	11	8
Dropped some markets	—	2	—	2	—	3
% of shippers who provided no response		7		8		—

¹Shippers could give more than one response to the question.

**Shippers' Reactions to a Proposed Increase in Trucking Rates
by Size of Shipper Freight Bill - 1994 vs 1993 — Less-than-Truckload**

Annual Freight Bill	Less-than-Truckload					
	Under \$1M		\$1- \$10M		Over \$10M	
	1993	1994	1993	1994	1993	1994
	<i>% of responding shippers¹</i>					
Successfully negotiated a reduction in the increase	45	39	65	56	69	83
Adjusted the price of goods accordingly	15	9	7	4	4	—
Absorbed the increase	26	21	25	14	24	—
Switched to other trucking firm	45	27	25	20	22	17
Switched to other mode of transport	5	2	4	—	2	—
Dropped some markets	—	2	—	—	—	—
% of shippers who provided no response		7		—		—

¹Shippers could give more than one response to the question.

Marine Transport

Assignment of Offshore Marine Traffic

	Export	Import
	<i>Number of respondents</i>	
CONTAINERIZED CARGO		
Intermediaries	79	51
Conference Shipping Lines	79	53
Non-conference/Independent Lines	47	25
Other (own vessels, charters, etc)	4	1
OTHER GENERAL CARGO		
Intermediaries	54	41
Conference Shipping Lines	18	18
Non-conference/Independent Lines	14	8
Other (own vessels, charters, etc)	5	1
BULK COMMODITIES		
Company's Vessels	8	1
Charter Operators	26	6

Willingness of Marine Carriers to Compete for Traffic

Traffic	In 1994		1994 versus 1993		
	Interested	Not interested	More interested	No change	Less interested
	<i>% of respondents</i>		<i>% of respondents</i>		
Domestic	49	51	12	81	7
Canada-U.S.	48	52	12	85	3
Other International - Export	84	16	31	64	5
Other International - Import	86	14	40	58	2

Shippers' Ratings of Service Factors: Containerized Cargo

	In 1994		1994 versus 1993		
	Satisfactory	Not satisfactory	Better	Same	Worse
	<i>% of respondents</i>		<i>% of respondents</i>		
Price/rate	83	17	10	77	13
Equipment Supply	92	8	4	896	7
Frequency of Sailing	88	12	5	93	2
Service Reliability	90	10	6	91	3
Transit Time	92	8	6	92	2
Space Availability	93	7	4	89	7
Shipment Tracing	90	10	6	93	1
Product care/Cargo handling	96	4	4	94	2
Overall Quality of Service	95	5	7	92	1

Shippers' Ratings of Service Factors: Non-Containerized General Cargo

	In 1994		1994 versus 1993		
	Satisfactory	Not satisfactory	Better	Same	Worse
	<i>% of respondents</i>		<i>% of respondents</i>		
Price/rate	89	11	11	82	7
Equipment Supply	94	6	2	96	2
Frequency of Sailing	80	10	6	91	3
Service Reliability	87	13	6	91	3
Transit Time	88	12	4	94	2
Space Availability	90	10	3	92	5
Shipment Tracing	90	10	5	95	0
Product care/Cargo handling	94	6	6	90	4
Overall Quality of Service	91	9	6	94	0

Shippers' Ratings of Service Factors: Bulk Commodities

	In 1994		1994 versus 1993		
	Satisfactory	Not satisfactory	Better	Same	Worse
	<i>% of respondents</i>		<i>% of respondents</i>		
Price/rate	89	11	19	75	6
Equipment Supply	84	16	10	71	19
Service Reliability	79	21	3	88	9
Transit Time	86	14	7	90	3
Product care/Cargo handling	92	8	9	85	6
Overall Quality of Service	95	5	9	88	3

Changes in Marine Cargo Rates Reported by Shippers

	Domestic	Canada-U.S.	Other Internat'l - Export -	Other Internat'l - Import -
Increases	25	15	76	51
Average Increase	4.4%	4.1%	4.6%	4.3%
Decreases	2	5	15	12
Average Decrease	-12.8%	-5.8%	-5.5%	-5.2%
No Change	19	16	54	41
Average Change	1.86%	0.90%	1.87%	1.52%

Use of Service Contracts and Independent Action Reported by Shippers

Proportion of Cargo Shipped	Service Contracts		Independent Action	
	Imports	Exports	Imports	Exports
	<i>% of shippers</i>		<i>% of shippers</i>	
0%	81	82	69	64
1-20%	7	6	3	14
21-40%	2	6	1	2
41-60%	2	1	4	4
61-80%	4	5	5	4
81-100%	4	4	18	13

APPENDIX B.1: Sample Air Routes

-
- a: Top 25 routes (Service and Tariff sections)
 - b: 19 Inter-regional routes (Service section)
 - c: 13 Atlantic regional routes (Service section)
 - d: 11 Ontario regional routes (Service section)
 - e: 11 Quebec regional routes (Service section)
 - f: 21 Western regional routes (Service section)
 - g: 35 Northern routes (Service section)
 - h: 24 North-South routes (Service section)
 - i: 41 Transborder routes (Service section)
 - j: 30 affiliate carrier routes (Tariff section)
 - k: 42 mainline, regional and other routes (Tariff section)
 - l: 35 northern routes (Tariff section)
-

Baie Comeau-Quebec	j	Edmonton-Grande Prairie	f,j	Îles de la Madeleine-Halifax	b,j
Big Trout Lake-Angling lake	g	Edmonton-Inuvik	h,l	Îles de la Madeleine-Quebec	e,k
Blanc Sablon-St. Anthony	g,l	Edmonton-Montreal	b,k	Inuvik-Ft. McPherson	g
Brandon-Winnipeg	f	Edmonton-Regina	f,k	Inuvik-Norman Wells	g,l
Calgary-Castlegar	f,k	Edmonton-Saskatoon	f,k	Inuvik-Sachs Harbour	g
Calgary-Chicago	i	Edmonton-Toronto	a	Inuvik-Tuktoyaktuk	g
Calgary-Edmonton	a	Edmonton-Vancouver	a	Inuvik-Yellowknife	g,l
Calgary-Grande Prairie	f,j	Edmonton-Yellowknife	h,l	Iqaluit-Coral Harbour	g,l
Calgary-Inuvik	l	Fredericton-Montreal	b,k	Iqaluit-Kuujuaq	g
Calgary-Los Angeles	i	Ft. St. John-Watson Lake	g,j	Iqaluit-Montreal	h,l
Calgary-Montreal	b,k	Ft. McMurray-Edmonton	h	Iqaluit-Nanisivik	g,l
Calgary-Ottawa	a	Ft. St. John-Fort Nelson	g,j	Iqaluit-Ottawa	l
Calgary-Salt Lake City	i	Ft. McMurray-Calgary	h,l	Iqaluit-Rankin Inlet	g,l
Calgary-Seattle	i	Ft. Chipewyan-Edmonton	h	Iqaluit-Resolute	g,l
Calgary-Toronto	a	Gander-St. John's	c,j	Iqaluit-Yellowknife	g,l
Calgary-Vancouver	a	Gillam-Churchill	g,l	Iqaluit-Hall Beach	g
Calgary-Winnipeg	a	Goose Bay-Churchill Falls	g,l	Iqaluit-Pangnirtung	g
Cambridge Bay-Iqaluit	g,l	Goose Bay-St. John's	h,l	Kamloops-Calgary	f,j
Cambridge Bay-Yellowknife	g,l	Goose Bay-Halifax	h,l	Kamloops-Edmonton	f,k
Campbell River-Vancouver	f,k	Grande Prairie-Vancouver	f,l	Kamloops-Vancouver	f,j
Charlottetown-Halifax	c,k	Halifax-Boston	i	Kelowna-Vancouver	a
Cranbrook-Calgary	f,j	Halifax-Moncton	c,j	Kenora-Red Lake	h,l
Cranbrook-Vancouver	f,j	Halifax-Montreal	a	Kuujuaq-Kangisualujuaq	g
Dawson Creek-Prince George	h,k	Halifax-New York	i	Kuujuaq-Tasiujaq	g
Dawson Creek-Edmonton	h	Halifax-Ottawa	a	Kuujuaaraapik-Inukjuag	g
Deer Lake-Halifax	c,k	Halifax-Saint John	c,k	Kuujuaaraapik-La Grande	g,l
Deer Lake-St. John's	c,k	Halifax-St. John's	a	Kuujuaaraapik-Sanikiluaq	g
Deer Lake-Montreal	b,k	Halifax-Sydney	c,j	La Grande-Montreal	l
Deer Lake-Wabush	h,k	Halifax-Toronto	a	London-Toronto	d,j
Dryden-Thunder Bay	d,j	Hamilton-Montreal	b,j	Moncton-Saint John	c,j
Dryden-Winnipeg	b,j	Hamilton-Ottawa	d	Moncton-Toronto	b,j

Montreal-Baltimore	i	Quebec-Rouyn/Noranda	e	Toronto-Chicago	i
Montreal-Atlanta	i	Quebec-Boston	i	Toronto-Cleveland	i
Montreal-Boston	i	Quebec-Gatineau	e	Toronto-Columbus	i
Montreal-Charlottetown	b,k	Quebec-Halifax	b,k	Toronto-Dallas Fort Worth	i
Montreal-Chicago	i	Quebec-Sept-Îles	e,j	Toronto-Houston	i
Montreal-Dallas Fort Worth	i	Quebec-Toronto	b,j	Toronto-Indianapolis	i
Montreal-Gatineau	e	Quebec-Val d'Or	e	Toronto-Kingston	d
Montreal-Los Angeles	i	Quebec-Wabush	h,l	Toronto-Los Angeles	i
Montreal-Miami	i	Rankin Inlet-Winnipeg	h,l	Toronto-Miami	i
Montreal-Moncton	b,j	Red Lake-Deer Lake	g	Toronto-New York	i
Montreal-New York	i	Red Lake-Pickle Lake	g	Toronto-North Bay	d
Montreal-Quebec	e,j	Regina-Toronto	b,k	Toronto-St Louis	i
Montreal-Rouyn/Noranda	e,k	Regina-Vancouver	f,k	Toronto-Vancouver	a
Montreal-Saguenay/Bagotville	e,k	Saint John-St. John's	c,k	Toronto-Washington	i
Montreal-Shefferville	j	Saskatoon-La Ronge	h	Toronto-Windsor	d,k
Montreal-Sept-Îles	e,k	Saskatoon-Prince Albert	f,k	Toronto-Winnipeg	a
Montreal-Toronto	a	Saskatoon-Regina	f,k	Vancouver-Chicago	i
Montreal-Val d'Or	e,k	Saskatoon-Stony Rapids	h	Vancouver-Dallas Fort Worth	i
Montreal-Vancouver	a	Saskatoon-Toronto	b,k	Vancouver-Dawson Creek	h,k
Montreal-Washington	i	Saskatoon-Winnipeg	f,k	Vancouver-Los Angeles	i
Norman Wells-Yellowknife	g,l	Sault Ste. Marie-Ottawa	d,k	Vancouver-New York	i
Ottawa-Baltimore	i	Sault Ste. Marie-Toronto	a	Vancouver-Penticton	f,j
Ottawa-Boston	i	Sioux Lookout-Big Trout lake	g	Vancouver-Port Hardy	f,j
Ottawa-Chicago	i	Sioux Lookout-Pickle Lake	g	Vancouver-San Francisco	i
Ottawa-Edmonton	b,k	St. John's-Toronto	a	Vancouver-Seattle	i
Ottawa-Fredericton	b,k	Stephenville-Gander	c,k	Vancouver-St. John's	b,k
Ottawa-Moncton	b,j	Stephenville-Halifax	c,j	Vancouver-Victoria	a
Ottawa-New York	i	Stephenville-St. John's	c,j	Vancouver-Whitehorse	h,l
Ottawa-North Bay	d	Sudbury-Montreal	k	Vancouver-Williams Lake	f,j
Ottawa-Regina	b,k	Sudbury-Toronto	d,k	Vancouver-Winnipeg	a
Ottawa-Saint John	b,k	The Pas-Winnipeg	h,l	Wabush-St. John's	h,l
Ottawa-Toronto	a	Thompson-Flin Flon	g,l	Whitehorse-Yellowknife	g,l
Ottawa-Vancouver	a	Thunder Bay-Toronto	a	Winnipeg-Churchill	h,l
Ottawa-Washington	i	Thunder Bay-Sioux Lookout	h	Winnipeg-Edmonton	f,k
Ottawa-Winnipeg	a	Timmins-Toronto	d,k	Winnipeg-Gillam	h,l
Pickle Lake-Thunder Bay	h,l	Toronto-Atlanta	i	Yarmouth-Halifax	c,j
Povungnituk-Inukjuag	g	Toronto-Baltimore	i	Yellowknife-Coppermine	g
Prince George-Vancouver	a	Toronto-Boston	i		

APPENDIX B.2: Regional Affiliates' Fleet Composition

Air Canada Connectors

	Fourth Quarter 1993	Fourth Quarter 1994	On Order
Air Nova	5 BAe 146-200s 12 DHC-8-100s	5 BAe 146-200s 12 DHC-8-100s	
Air Alliance	11 DHC-8-100s	12 DHC-8-100s	
Air Ontario	17 DHC-8-100s 6 DHC-8-300s	16 DHC-8-100s 6 DHC-8-300s	
AirBC	5 BAe 146-200s 5 BAe Jetstream 31s 11 DHC-8-100s 6 DHC-8-300s 4 DHC-6 Twin Otters	5 BAe 146-200s 5 BAe Jetstream 31s 11 DHC-8-100s 6 DHC-8-300s 4 DHC-6 Twin Otters	
NWT Air	3 B737-200Cs 1 L-382G Hercules	3 B737-200Cs 1 L-382G Hercules	
Total	86	86	0

Canadian Partners

	Fourth Quarter 1993	Fourth Quarter 1994	On Order
Air Atlantic	3 BAe 146-200s 11 DHC-8-100s	3 BAe 146-200s 11 DHC-8-100s	
Inter-Canadien	8 ATR-42-300s	8 ATR-42-300s 2 Fokker F28s	
Canadian Regional Airlines ¹	7 ATR-42-300s 2 DHC-8-100s 14 DHC-8-300s 8 Fokker F28s 3 SD3-60s 1 CV-580	7 ATR-42-300s 6 DHC-8-100s ² 14 DHC-8-300s 8 Fokker F28s 3 SD3-60s	
Calm Air	4 HS.748s 2 DHC-6 Twin Otters 1 Beech King Air 200 1 PA-31	4 HS.748s 2 DHC-6 Twin Otters 2 Beech King Air 200s 1 PA-31 1 Saab 340B	1 Saab 340B
Total	65	72	1

¹ Time Air and Ontario Express were merged in 1993 into Canadian Regional Airlines.

² Four are leased out.

APPENDIX B.3: Equations

Equations Used for Average Air Fare Yields

The graphs in the Air Tariffs section of air fare yields by region showed lines representing the national average yield for a given distance. The equations used to calculate these national averages were derived by linear regression from the economy and discount air fares published in the third quarter of 1994 by the Airline Tariff Publishing Company, using a sample of 132 city-pairs (listed in Appendix B.1).

If
 y = yield in cents per mile,
 and
 x = distance between cities in miles,
 then
 $y = 1,351x^{-0.37}$ for economy fares,
 and
 $y = 805.5x^{-0.41}$ for discount fares

Regression Results

Economy Fares

Constant	$3.131 = \log(1,351)$
Std Err of Y Est	0.092
R Squared	0.7
No. of Observations	132
Degrees of Freedom	130
x Coefficient	-0.37
Std Err of Coefficient	0.022

Discount Fares

Constant	$2.906 = \log(805.5)$
Std Err of Y Est	0.129
R Squared	0.588
No. of Observations	132
Degrees of Freedom	130
x Coefficient	-0.41
Std Err of Coefficient	0.03

APPENDIX C.1: Railway Track Kilometres Abandoned

Track Kilometres Abandoned in Canada by Province

Province	1981 ¹ - 1987	1988 - 1994
Newfoundland	174.68	968.35 ²
Prince Edward Island	7.77	378.21
Nova Scotia	728.90	497.64
New Brunswick	484.28	872.70
Quebec	145.76	1,566.89
Ontario	1,159.28	1,695.78
Manitoba	14.48	630.61
Saskatchewan	288.56	689.06
Alberta	203.81	409.55
British Columbia	3.38	609.97
Northwest Territories	—	87.39
Total	3,210.90	7,526.15

¹Since July 15, 1981

²This figure includes 880 kilometres of track abandoned on September 30, 1988 as a result of an agreement between the Minister of Transport and the Newfoundland government with respect to the termination of rail operations in that province.

APPENDIX C.2:

Summary of Orders and Decisions, 1994

Branch Line Abandonment under the NTA, 1987

Province/Railway/ Subdivision	Between Points	Track Miles	Order No./Date	Decision
Quebec				
CP Vallée/ Chaudière/ Lévis/ Tring	0.0 - 130.4 0.0 - 78.5 0.0 - 27.5 0.0 - 1.0	237.40	1994-R-340 94/08/10	Abandoned November 10, 1994; Portion of Vallée Subdivision abandoned December 22, 1994
Ontario				
CN Graham	Conmee - Superior Jct. 0.0 - 159.5 incl. the Mattabi Mine Spur, 13.5 miles	173.00	1994-R-196 94/05/31	Abandoned September 1, 1994
CN Fonthill Spur off Thorold Subdivision	Thorold - Fonthill 6.3 - 11.9	5.60	1994-R-213 94/06/09	Abandoned July 9, 1994
CN Petrolia Spur off Strathroy Subdivision	Petrolia - Petrolia Jct. 0.0 - 4.7	4.70	1994-R-214 94/06/10	Abandoned July 10, 1994
CN Manitouwadge	Hillsport - Geco 0.9 - 22.3	21.40	1994-R-236 94/06/23	Abandoned July 23, 1994
CP Scarborough Industrial Spur off Belleville Subdivision	0.0 - 0.76	0.76	1994-R-303 94/08/03	Abandoned September 2, 1994
CP Scarborough Pit Spur off Belleville Subdivision	0.0 - 2.0	2.00	1994-R-346 94/08/12	Abandoned November 10, 1994
CN Rymal Spur off Hagersville Subdivision	Rymal - Caledonia 6.5 - 15.9	9.40	1994-R-345 94/08/12	Abandoned November 10, 1994
CN Marmora	Picton - Trenton 0.0 - 30.15 incl. the Bethlehem Spur, 4.2 miles and the Lake Ontario Cement Lead, 1.3 miles	35.65	1994-R-370 94/09/08	Ordered abandoned April 8, 1995

Province/Railway/ Subdivision	Between Points	Track Miles	Order No./Date	Decision
CSXT Blenheim	Ruthven - Blenheim 33.79 - 73.0 (excl. segment from 37.35 to 38.16 operated by CN)	39.21	1994-R-391 94/09/22	Abandoned December 30, 1994
CSXT Blenheim	Oldcastle - Harrow 8.0 - 21.0	13.00	1994-R-466 94/11/18	Abandoned December 18, 1994
CP St. Mary's	Embro - St. Mary's 5.5 - 23.6	18.10	1994-R-493 94/12/05	Ordered abandoned March 5, 1995
CN Meaford	Barrie - Collingwood 1.09 - 31.4, incl. Penetang and Pretty River Spurs, 2.92 miles	33.23	1994-R-219 94/06/15	Ordered continued for 2 years
CN Midland	Uthoff - Midland 52.0 - 75.21 incl. Midland Industrial Spur, 0.92 miles and Coldwater Spur, 0.71 miles	24.84	1994-R-255 94/07/08	Abandoned October 8, 1994
Manitoba				
CN Erwood	Birch River - Baden 22.9 - 50.8 incl. the Inland Cement Spur, 5.9 miles	33.80	1994-R-242 94/06/30	Abandoned July 30, 1994
Saskatchewan				
CN Gravelbourg	Gravelbourg Jct. - Claybank 0.0 - 7.9	7.90	1994-R-361 94/09/02	Abandoned October 2, 1994
CN Imperial	Holdfast - Dilke 50.6 - 60.2	9.60	1994-R-395 94/09/26	Abandoned October 26, 1994
CP Prince Albert	St. Benedict - Northway 57.8 - 94.4	36.60	1994-R-398 94/09/26	Abandoned October 26, 1994
CN Blaine Lake	Paddockwood Jct. - Shellbrook 0.7 - 27.4	26.70	1994-R-514 94/12/22	Ordered abandoned January 21, 1995
British Columbia				
CP Slocan	Slocan South - Slocan City 1.4 - 31.3	29.90	1994-R-317 94/08/02	Abandoned December 15, 1994

APPENDIX C.3: Rail and Truck Subsidies, 1994

Rail and Truck Subsidy Payments Made by National Transportation Agency in Calendar Year 1994

Subsidy Program	\$ (000)
<i>WGTA</i>	
- Rail	672,727
Branch Lines	
- Rail	10,700
Passenger (non-VIA)	
- Rail	7,721
<i>ARFAA</i>	
- Truck	88,901
- Rail	10,947
<i>MFRA</i>	
- Rail	9,312

Legend

WGTA = Western Grain Transportation Act

ARFAA = Atlantic Region Freight Assistance Act

MFRA = Maritime Freight Rates Act

Source: National Transportation Agency

MFRA/ARFAA Payments for 1994

	\$Millions
MFRA	
Basic Westbound (Rail)	9.31
Selective Assistance (Rail)	3.88
ARFAA	
Basic Westbound (Truck)	32.12
Selective Assistance (Truck)	12.43
Special Selective (Intra):	
Truck	44.35
Rail	7.07
Water	<u>0.51</u>
Total	109.67

MFRA/ARFAA Total Subsidies by Mode

Truck	88.90
Rail	20.26
Water	<u>0.51</u>
Total	109.67

Top Ten Payments Under ARFAA for the Fiscal Period 1993-94*(Sorted by the year 1993-94)*

	1991-92	1992-93	1993-94
CN Rail, Montreal, Quebec	17,168,706	7,915,425	6,628,504
Midland Transport Ltd, Moncton, NB	5,351,089	4,913,346	4,790,203
Cape Breton Dev Corp (DEVCO), Sydney, NS	6,158,203	4,614,566	4,439,757
Day & Ross Inc, Hartland, NB	4,941,523	3,847,243	3,805,297
Armour Transport Inc, Moncton, NB	988,758	1,107,042	1,951,127
Sunbury Transport Ltd, Fredericton, NB	2,323,310	1,969,631	1,855,245
Transport Samson Inc, Laval, Que	1,196,527	1,538,450	1,722,763
Brookville Transport Ltd, Saint John, NB	781,469	1,356,744	1,323,812
SG Transport Ltd, Fredericton, NB	837,941	956,304	1,003,917
Canadian Pacific Express & Transport, Saint John, NB	2,066,251	1,269,427	953,438

APPENDIX C.4: Branch Line Subsidies, 1994

Rail Branch Line Subsidies Paid in 1994 (by Province and Subdivision)

Province/Railway/ Subdivision	Between Points	Total Paid (\$)
Nova Scotia		
CN		
Chester	Summit - Barry's Stillwater Marsh	97,027
Oxford	Near Oxford Jct. - Pugwash	9,864
CP		
Halifax/Kentville	Mile 52.9 - Mile 56.1 & spurs	69,589
	Provincial Total Paid	176,480
New Brunswick		
CN		
Havelock	Petitcodiac - Havelock	12,331
CP		
Fredericton	Mile 0.0 - Mile 1.0	22,373
Nackawic Loop	Fredericton/Minto/Southampton	(99,702)
Shogomoc	Upper Kent - Aroostook	(7,127)
Shogomoc	Woodstock - Newburg	8,220
Shogomoc/Gibson	Florenceville - Southampton	(3,975)
St. Andrews	Watt - Mile 18.1	8,535
St. Stephen	McAdam - St. Stephen	3,321,302
Tobique	Perth Jct. - Plaster Rock	1,448
	Provincial Total Paid	3,263,405

Province/Railway/ Subdivision	Between Points	Total Paid (\$)
Quebec		
CN		
Chandler	Ste-Adelaïde - Gaspé	1,008,244
Chapais	Franquet - Near Grevet	35,249
Chapais	Near Grevet - Chapais	176,886
Granby	Granby West - Marieville	20,997
Harbour Branch Spur	Mile 0.40 - Mile 1.30	496
Massena	Huntingdon - St-Isidore	81,720
Montmagny	Harlaka - St-Romuald	220,234
Sorel	Sorel - Near Sorel	(24,336)
St-Raymond	Near Shannon - Near St-Raymond	23,425
CP		
Beebe	Beebe Jct. - Border	(92)
Berthierville	Mile 0.0 - Mile 2.1	3,802
St-Gabriel	Joliette - St-Félix	4,510
Tring	Mile 57.7 - Mile 59.1	6,721
Wamo Spur	Wamo Spur	60
	Provincial Total Paid	1,557,916
Ontario		
CN		
CASO	Hewitt - Fargo	(162,121)
Dundas/Burford	Brantford - Near Burford	5,393
Graham	Connree - Superior Jct.	39,398
Havelock	Mile 0.5 - Mile 12.4	137
Kincardine	Mile 0.0 - Mile 1.41	14,529

Province/Railway/ Subdivision	Between Points	Total Paid (\$)
Ontario		
CN (cont'd)		
Meaford	Barrie - Collingwood	(199,248)
Midland	Uhthoff - Midland	(243,745)
Newmarket	Dykstra - Near North Bay	21,021
Newton	Stratford - Palmerston	180,503
Owen Sound	Palmerston - Harriston	(6,148)
Smiths Falls	Richmond - Smiths Falls	280,255
Taschereau	La Sarre - Cochrane	653,897
Uxbridge	Mile 38.88 - Stouffville	(9,358)
CP		
CASO	Hewitt - Fargo	(540,218)
Port McNicoll	Uhthoff - Medonte	(6,339)
Waterloo	North Jct. - Waterloo	(6,753)
	Provincial Total Paid	21,203
Manitoba		
CN		
Oak Point	Moore - Steep Rock	32,034
Ste. Rose	Ochre River - Ste. Rose	391
Sherridon	Sherritt Jct. - Lynn Lake	730,539
Thicket-Herchmer	Thompson Jct. - Gillam	516,237
	Provincial Total Paid	1,279,201

Province/Railway/ Subdivision	Between Points	Total Paid (\$)
Saskatchewan		
CN		
Carlton	Dalmeny - Laird	7,803
Gravelbourg	Gravelbourg Jct. - Claybank	37,030
Imperial	Holdfast - Dilke	72,471
Meadow Lake	Tobey - Meadow Lake	1,096,696
Northgate	Northgate - Lampman	79,992
Paddockwood	Whitestar - Paddockwood	44,077
Weyburn	Talmage - Weyburn	(63,923)
CP		
Assiniboia	Exon - Pangman	72,770
Gravelbourg	Hodgeville - Tyson	(2,172)
Kisbey	Stoughton West - Griffin	(19,695)
Outlook	Broderick - Outlook	37,552
Shamrock	Tyson - Hallonquist	1,052
	Provincial Total Paid	1,363,653
Alberta		
CN		
Athabasca	Legal - Athabasca	51,053
Lac La Biche Waterway	Egremont - North Lynton	2,241,915
Meander River	High Level - Hay River	888,058
Pine Point	Pine Point Jct. - Pine Point	2,249
Sheerness	Batter Jct. - Sheerness	112,645
Waterways	North Lynton - Waterways	24,880

Province/Railway/ Subdivision	Between Points	Total Paid (\$)
Alberta		
CP		
Breton	Calmar - Breton	(311,437)
	Provincial Total Paid	3,009,363
Total Paid in 1994		10,671,487

Note: Negative balances are due to adjustments made to payments for previous years.

APPENDIX C.5: VIA Rail

VIA Rail Statistics — 1994

Route	Ridership ¹	Weekly Round Trips
Corridor		
Montreal-Quebec	264,582	25
Montreal-Ottawa	248,194	26
Montreal-Toronto	841,851	38
Toronto-Ottawa	516,526	25
Toronto-London	71,740	5E/6W
Toronto-Windsor	580,763	30
Toronto-Sarnia	284,860	14
Toronto-Niagara Falls	199,404	14
Total Corridor	3,007,920	178
Transcontinental		
Toronto-Vancouver	153,763	3
Total Western Transcontinental	153,763	3
Montreal-Saint John-Halifax ²	100,914	3
Montreal-Mont-Joli-Halifax	122,728	3
Montreal-Gaspé	38,689	3
Total Eastern Transcontinental	262,331	9
Total Transcontinental	416,094	12

Route	Ridership ¹	Weekly Round Trips
Remotes		
Montreal-Jonquière	22,303	3
Montreal-Senneterre	27,931 ³	3
Senneterre-Cochrane		3
Sudbury-White River	7,425	3
Winnipeg-Churchill	35,664	3
Wabowden-Churchill	886	1
The Pas-Lynn Lake	10,313	3
Jasper-Prince Rupert	15,562	3
Total Remotes	120,084	22
Regional		
Victoria-Courtenay	44,698	7
Total Regional	44,698	7
Grand Total	3,588,796	219

¹ All passengers including infants.

² Service discontinued December 17, 1994.

³ No breakdown available for the two individual routes.

Source: VIA Rail

APPENDIX D.1: Canadian Merchant Fleet

Self-Propelled Ships of 1,000 Gross Tons and Over

	As of Dec. 31, 1994			As of Dec. 31, 1991		
	No.	Gross Tons	Deadweight Tons	No.	Gross Tons	Deadweight Tons
FOREIGN TRADE						
General Cargo Ships	2	12,159	16,429	1	2,125	3,627
Tankers	1	5,836	9,719	4	75,167	120,999
Ore/Oil Carriers	1	20,118	26,440	1	20,118	26,440
Foreign Trade Total	4	38,113	52,588	6	97,410	151,066
HOME TRADE						
Atlantic Coast						
Ferries	17	134,221	27,954	16	126,331	26,854
Combined Passenger/General Cargo Ship	4	9,178	5,313	5	11,972	7,169
General Cargo Ships	9	58,117	60,794	11	64,165	72,297
Dry-Bulk Carriers	6	69,433	112,727	6	67,190	110,182
Tankers	23	166,816	258,737	19	124,116	187,741
Atlantic Coast Total	59	437,765	465,525	57	393,774	404,243
Pacific Coast						
Ferries	31	172,048	40,523	28	131,669	33,959
General Cargo Ships	—	—	—	1	8,040	7,012
Dry-Bulk Carriers	2	17,639	22,770	2	17,639	22,770
Tankers	1	3,047	4,856	1	3,047	4,856
Pacific Coast Total	34	192,734	68,149	32	160,395	68,597
Home Trade Total	93	630,499	533,674	89	554,169	472,840
INLAND WATERS TRADE						
Ferries	13	39,609	9,392	12	36,779	9,392
Passenger Ships	2	3,923	813	2	3,923	813
General Cargo Ships	2	7,118	9,694	2	7,118	9,694
Dry-Bulk Carriers	68	1,264,370	1,919,448	72	1,298,834	1,965,685
Tankers	6	29,613	45,092	9	45,382	69,167
Inland Water Trade Total	91	1,344,633	1,984,439	97	1,392,036	2,054,751
Grand Total	188	2,013,245	2,570,701	192	2,043,615	2,678,657

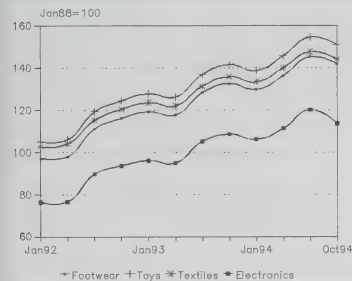
	As of Dec. 31, 1994			As of Dec. 31, 1991		
	No.	Gross Tons	Deadweight Tons	No.	Gross Tons	Deadweight Tons
TOTALS BY TYPE						
Ferries	61	345,878	77,869	56	294,779	70,205
Passenger Ships	2	3,923	813	2	3,923	813
Combined Passenger/ General Cargo Ships	4	9,178	5,313	5	11,972	7,169
General Cargo Ships	13	77,394	86,917	15	81,448	92,630
Dry-Bulk Carriers	76	1,351,442	2,054,945	80	1,383,663	2,098,637
Tankers	31	205,312	318,404	33	247,712	382,763
Ore/Oil Carriers	1	20,118	26,440	1	20,118	26,440
Grand Total	188	2,013,245	2,570,701	192	2,043,615	2,678,657

Source: National Transportation Agency

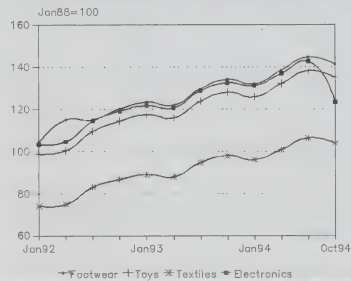
APPENDIX D.2: Liner Conference Rates

All-Water Conference Freight Rates Index

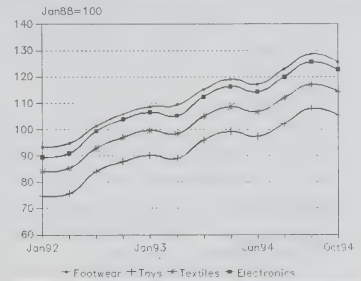
For Selected Major Imports from Korea to the Canadian West Coast



For Selected Major Imports from Korea to the Canadian East Coast

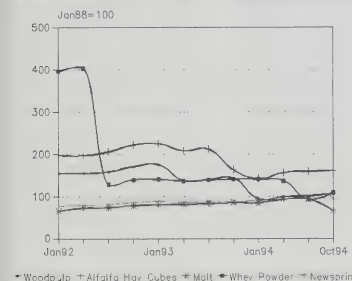


Mini-Landbridge Conference Freight Rates Index for Major Imports from Korea to Canadian East Coast

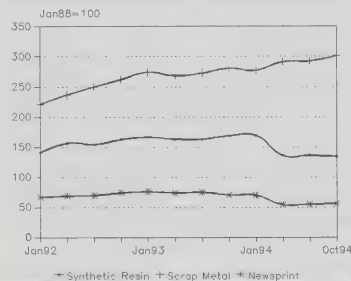


All-Water Conference Freight Rates Index

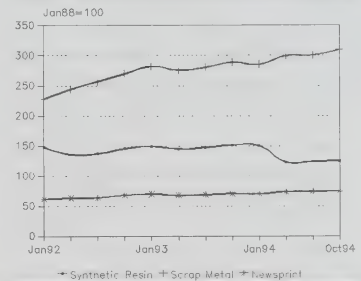
For Selected Major Exports to Korea from the Canadian West Coast



For Selected Major Exports to Korea from the Canadian East Coast

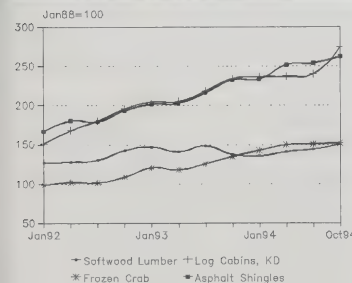


Mini-Landbridge Conference Freight Rates Index for Major Exports to Korea from the Canadian East Coast (all rates apply from Montreal)

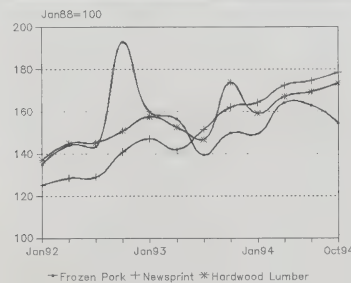


All-Water Conference Freight Rates Index

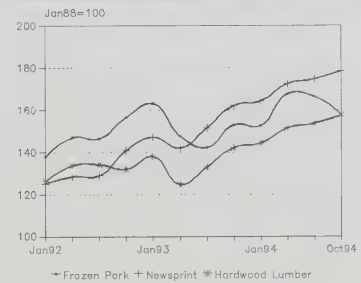
For Selected Major Exports to Japan from the Canadian West Coast



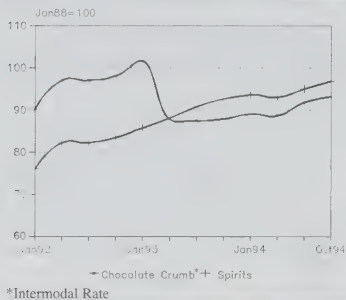
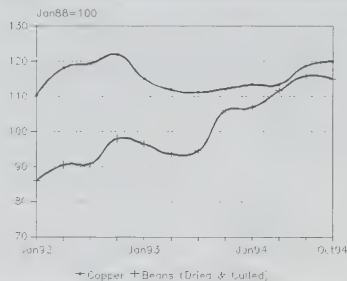
For Selected Major Exports to Japan from the Canadian East Coast



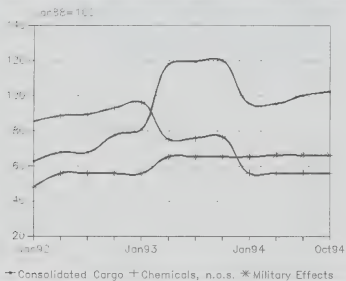
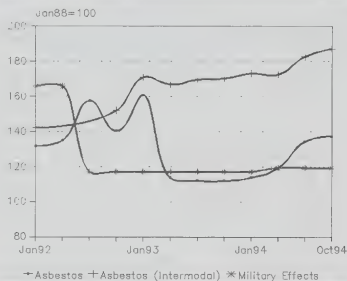
Mini-Landbridge Conference Freight Rates Index for Major Exports to Japan from the Canadian East Coast (all rates apply from Montreal)



Conference Freight Rates Index

For Selected Major Imports from
the U.K. to the Canadian East CoastFor Selected Major Exports to
the U.K. from the Canadian East Coast

Conference Freight Rates Index

For Selected Major Imports
from Europe to the Canadian East CoastFor Selected Major Exports
to Europe, from the Canadian East Coast

Source: Conference Tariffs on file

APPENDIX E: Employment

Based on Statistics Canada's Labour Survey, overall employment grew slightly by 1.1 per cent in 1994. The most significant rate of growth in employment was noted in the mining industry (9.1 per cent), followed by the construction sector (2.7 per cent), manufacturing (2.3 per cent), the logging and forestry (1.7 per cent), and the service industry (1.1 per cent). Employment in the transportation industry grew marginally by one per cent while there was virtually no change for trades and public administration. The finance industry showed a decrease of 3.2 per cent.

Of the four modes examined in this review, employment increased in all modes except for the railways. According to Statistics Canada's Labour Survey, employment increased 8.5 per cent in water transportation, 7.8 per cent in air services and 2.6 per cent in trucking operations. Air services showed the first employment increase since 1990 and employment in trucking operations went up for the first time since 1989. In contrast, employment in rail services continued to drop, a trend which has prevailed for years. In 1994, employment for the railways declined again, dropping by 3.4 per cent.

Employment in Canada's transportation industry had been declining since 1990, but last year the number of transportation employees grew by close to one per cent. On a regional basis, total transportation employment grew in British Columbia, Manitoba, Ontario and Nova Scotia while it shrunk in New Brunswick,

Table E.1
Annual Percentage Rate of Changes in Transportation
Employment by Mode in Canada and in the U.S.

	Mode of Transportation							
	Rail		Trucking		Air		Water	
	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.
1983-1987	(3.9)	(5.3)	1.3	3.5	2.5	5.2	(3.7)	(1.9)
1988-1994	(3.0)	(2.2)	(1.2)	1.9	(0.1)	2.2	(1.1)	(0.4)
1983-1994	(3.6)	(3.8)	0.04	3.1	1.6	4.1	(2.0)	(1.1)

() Indicates negative figures.

Source: Statistics Canada and U.S. Department of Labor

Quebec, Alberta and Yukon. Information was not available for the provinces of Newfoundland, Prince Edward Island, Saskatchewan and the North West Territories as Statistics Canada did not release transportation employment information for these provinces for reason of confidentiality.

Increased trade between Canada and the U.S. has led to more competition between the two transportation systems. Table E.1 summarizes the changes in transportation employment in Canada and the U.S.

In rail services, both countries saw a reduction in employment. Between 1983 and 1987, railways in both countries reduced their workforce, but the rate of reduction was faster in the U.S. than in Canada. This trend reversed between 1988 and 1994 when Canadian railways reduced their workforce faster than U.S.

railways. Overall, between 1983 and 1994, the rate of change in rail employment was similar in both countries.

In the Canadian trucking industry, employment grew at a rate of 1.3 per cent during 1983-1987 and declined at a rate of 1.2 per cent between 1988 and 1994. Overall employment in the trucking sector grew at a rate of 0.04 per cent during the 1983-1994 period. The trucking industry employed 131,000 people in Canada in 1994 compared to 130,300 in 1983. In the U.S., however, employment grew at a faster rate. In the 1983-1987 period, U.S. employment grew at a rate of 3.5 per cent, but the rate of growth slowed in the 1988-1994 period showing an average 1.9 per cent annual increase. Trucking employment in the U.S. grew at an average annual rate of 3.1 per cent between 1983 and 1994.

In the Canadian air transport industry, employment grew from 1983 to 1987 and declined marginally from 1988 to 1994. In the U.S., employment grew in both periods with slower growth in 1988-1994. Employment grew in both countries for the entire period 1983 to 1994, but at a slower rate in Canada.

In the water transport industry, employment declined in both countries in all periods. In Canada, the workforce was reduced at a faster rate compared to the U.S.

Earnings

Average weekly earnings in transportation increased by 1.63 per cent in 1994. In rail services, the increase was 2.1 per cent, compared to 1.4 per cent in trucking. In air, average weekly earnings came down

Table E.3

Average Weekly Earnings (Current dollars)

Year	Transport Sector					All Sectors
	Air	Rail	Truck	Water	All	
1994	725	910	590	814	670	567
1993	742	890	582	833	659	556
1992	776	844	571	776	647	547
1991	745	821	555	750	635	529
1990	702	770	544	728	601	505
1989	653	726	541	733	590	483
1988	629	695	529	699	572	460
1987	593	631	498	658	541	440
1986	583	628	479	614	527	424
1985	578	588	482	620	514	412
1984	569	575	475	598	502	398
1983	545	538	458	554	479	382

Please note that the numbers in this table might not correspond to the numbers reported in previous Annual Reviews as this table has been updated to reflect the revisions made to the data in 1994 by Statistics Canada.

Table E.2

Annual Percentage Rate of Changes in Average Weekly Earnings by Mode in Canada and in the U.S.

	Mode of Transportation							
	Rail		Trucking		Air		Water	
	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.
1983-1987	3.0	2.8	1.7	0.6	1.6	2.6	3.4	3.9
1988-1994	4.9	2.7	1.8	2.6	2.3	1.5	2.7	3.8
1983-1994	4.9	3.3	2.3	1.9	2.6	1.1	3.5	3.2

Source: Statistics Canada and U.S. Department of Labor

0.4 per cent. In the marine sector, average weekly earnings came down by 1.3 per cent, the first decrease in salaries since 1986.

On a regional basis, average weekly earnings in transportation grew in

Nova Scotia, New Brunswick, Quebec, Ontario and Alberta. A reduction in average weekly earnings was reported in Manitoba, British Columbia and Yukon. In general, weekly earnings went up in the provinces where the number of

employees went down. However, both employment and earnings in transportation increased in Nova Scotia and Ontario.

Table E.2 summarizes the annual percentage rate of changes in average weekly earnings by mode in Canada and the U.S. Average weekly earnings in Canada and in the U.S. are compared by rates of change, to overcome fluctuations in the currencies,

In rail, average weekly earnings grew at a faster rate in Canada than in the U.S. Although the U.S. and Canadian railways reduced employment at about the same rate between 1983 and 1994, weekly earnings for Canadian rail employees increased faster than those for employees in the U.S.

In trucking, average weekly earnings grew at a faster rate for Canadian employees than those of their American counterparts, between 1983 and 1994.

Average salaries paid to employees in the air industry increased in both Canada and the U.S. from 1983 to 1987. Salaries in the U.S. rose at a higher rate until 1988 when the trend reversed and average salaries in Canada increased at a faster pace than those in the U.S. This trend continues for the whole period from 1983 to 1994.

In marine, average weekly earnings grew at about the same pace in both countries for the first period and also for the 1983 to 1994 period. After 1988, average weekly earnings grew at a faster pace in the U.S.

Management-Labour Relations in Transportation

In a number of instances, employees acquired partial or total ownership in transportation companies including Canadian Airlines and CP Express. NWT Air of Yellowknife, wholly owned by Air Canada at year end, was the subject of negotiations with employee and investor groups, but nothing had been finalized by early May 1995. In the U.S., employees at Northwest Airlines took equity in exchange for wage concessions, and United Airlines experienced the largest employee buyout ever when the majority of employees accepted equity in exchange for wage concessions.

Table E.4

Number of Employees in Transportation in Canada (in thousands)

	Transport Sector					All Other Sectors
	Air	Rail	Truck	Water	All	
1994*	60.7	57.6	131.0	26.8	442.7	10,388.9
1993	56.3	59.6	127.7	24.7	439.4	10,273.4
1992	58.4	62.5	127.2	23.1	442.2	10,245.1
1991	61.8	63.9	127.3	26.2	450.3	10,549.5
1990	68.2	68.6	144.9	27.5	490.5	11,146.1
1989	65.9	73.0	150.8	29.5	480.0	11,054.7
1988	61.2	76.3	142.7	29.0	461.8	10,659.0
1987	57.3	79.1	139.4	28.4	454.9	10,329.1
1986	55.1	88.3	136.5	28.4	458.5	9,927.2
1985	51.7	91.1	140.6	28.9	459.3	9,651.1
1984	49.5	95.5	139.8	30.6	461.0	9,311.9
1983	50.3	96.2	130.3	33.6	458.2	9,081.9

Please note that the numbers in this table might not correspond to the numbers reported in previous Annual Reviews as this table has been updated to reflect the revisions made to the data in 1994 by Statistics Canada.

*Numbers reported are based on an average calculated on 11 months of the year.

Source: Statistics Canada

Strikes and Lockouts

Although the transportation industry experienced fewer strikes in 1994 compared to 1993, the number of workers involved almost doubled. This was due to the 15-day strike by the B.C. Maritime Employers Association that involved 3,500 workers.

Unlike the air, marine and truck modes, the railways experienced the same number of strikes but involving fewer workers in 1994 compared to 1993. Air experienced more strikes involving more workers compared to 1993. In July, close to 300 Canadian Regional pilots went on strike over wages and working conditions. During that time Canadian Regional

Airlines temporarily laid off 200 flight attendants and was forced to cancel flights.

In July, approximately 200 employees consisting of baggage handlers, ticket clerks and mechanics at Air Ontario, were on strike for two weeks.

Two rail disputes were reported in 1994: Quebec North Shore & Labrador Railway and Ontario Northland Railway. These disputes involved less than half of the workers involved in rail strikes in 1993. Also compared to other modes, the number of person-days lost was reduced by a quarter from 1993.

Strikes and Lockouts in 1994 within the Transportation Industry

Air Transport

Norontair, Thunder Bay, Ontario
(from May 20 to June 30, 1994)
Air Ontario (from July 29 to
August 12, 1994)
Canadian Regional Airlines
(from July 11 to 29, 1994)

Rail Transport

Quebec North Shore & Labrador
Railway (from February 20 to May
23, 1994)
Ontario Northland Railway
(from November 28, 1994 to
February 24, 1995)

Trucking

Les Distributeurs Allways
Québec Inc. (from March 17 to
June 30, 1994)
Intercounty Milk Transport,
Ontario (from December 10, 1993
to January 31, 1994)
Beaver Trucking, British-
Columbia (from April 20 to
July 15, 1994)

Water Transport

B.C. Maritime Employers
Association (from January 27 to
February 10, 1994)

1994 was a calm year with respect to strikes in trucking. Three cases were reported in 1994: Les Distributeurs Allways Québec Inc., Intercounty Milk Transport and Beaver Trucking. These strikes involved only 40 workers. None of the major trucking firms were involved in labour disputes.

**Table E.5
Strikes and Lockouts**

Number of Cases

Year	Air	Rail	Truck	Water
1994	3	2	3	1
1993	2	2	4	2
1992	2	1	5	3
1991	2	—	5	5
1990	1	3	6	6
1989	3	4	12	4
1988	4	1	5	5
1987	4	1	3	5
1986	6	1	4	6
1985	10	—	6	1
1984	3	—	5	—
1983	4	2	12	3

Workers Involved

Year	Air	Rail	Truck	Water
1994	538	610	40	3,500
1993	446	1,612	245	106
1992	543	258	651	1,305
1991	320	—	3,399	353
1990	24	1,880	572	415
1989	187	444	2,811	2,527
1988	1,016	3,000	214	5,734
1987	8,930	48,660	92	1,441
1986	3,860	102	73	5,026
1985	12,633	—	79	78
1984	125	—	366	—
1983	478	1,565	465	146

Source: Labour Canada

Table E.6
Regional Distribution of Transportation Employment since 1983

Region	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Nfld.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
P.E.I.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
N.S.	13,400	13,900	13,200	13,200	13,700	12,800	13,200	13,100	11,500	11,400	11,300	11,600
N.B.	14,200	14,900	15,000	14,800	13,900	12,800	13,300	12,700	11,100	11,400	12,000	11,600
Que.	111,800	113,300	106,500	103,400	109,700	111,300	115,800	114,000	106,800	106,200	109,300	108,400
Ont.	141,100	142,800	145,200	152,000	148,200	154,600	156,600	169,400	149,500	150,300	143,600	143,900
Man.	25,700	25,700	24,700	24,600	23,400	24,100	25,300	24,600	24,000	22,800	23,300	24,200
Sask.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Alta.	46,800	46,700	51,100	47,300	45,100	46,700	47,400	53,000	46,000	45,500	46,000	42,600
B.C.	70,900	70,200	69,800	70,100	69,200	66,500	74,400	69,000	69,300	62,100	63,000	70,200
Yukon	1,100	1,200	1,300	1,400	1,200	1,300	1,400	1,100	800	800	700	500
N.W.T.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Total	425,000	428,700	426,800	426,800	424,400	430,100	447,400	456,900	419,000	410,500	409,200	413,000

* Please note that the numbers in this table might not correspond to the numbers reported in previous Annual Reviews as this table has been updated to reflect the revisions made to the data in 1994 by Statistics Canada.

N.A.: Subsequent to Statistics Canada revision, some data is not available due to confidentiality.

APPENDIX F: Safety

Air Services

Accidents involving Canadian registered commercial aircraft rose from 177 in 1993 to 186 in 1994 according to preliminary statistics released by the Transportation Safety Board of Canada (TSB). This increase was due entirely to the rise in the number of accidents involving Level III to VI operators. All 17 fatal accidents reported in 1994, involved these smaller carriers who were engaged in charter, contract and specialty flying operations; forty-eight fatalities resulted from these incidents. Canada's two major airlines, Air Canada and Canadian Airlines International have not been involved in a fatal accident since 1983.

As required by legislation, occurrences such as declared emergencies, engine failures, etc. must be reported to the TSB. The majority of these occurrences involved losses of separation in air traffic control. A total of 579 incidents were reported in 1994, a four per cent decrease from 1993.

Rail Services

Preliminary figures provided by TSB show that the number of train accidents rose 17 per cent from 866 in 1993 to 1,016 in 1994. Train accidents include collisions, derailments and crossing accidents. The overall increase in the number of train accidents was attributed to a 33 per cent increase in terminal accidents. Terminal accidents accounted for almost one-half of all train accidents in 1994. Much of this increase in terminal accidents can be

traced to new reporting criteria which require that accidents in yards, spurs and sidings now be reported if the damage sustained affects safe operations. These accidents normally occur at slow speed during switching/humping operations and are generally related to non-compliance with established procedures. The number of main track accidents increased by 23 per cent, while the number of crossing accidents remained virtually unchanged from 1993. Table F.1 shows the breakdown of the number of train accidents by region. The number of train accidents rose in all regions from the previous year. Quebec and Ontario registered the largest increase from 1993, with 55 and 33 more accidents, respectively.

Table F.1
Number of Train Accidents
by Region

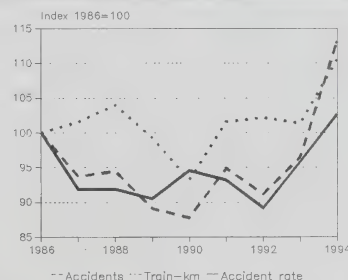
	1993	1994
Atlantic	53	61
Que.	154	209
Ont.	276	309
Man.	88	101
Sask.	74	92
Alta.	120	142
B.C.	101	102
Total	866	1,016

Source: Transportation Safety Board of Canada

In 1994, the number of train-kilometres under federal jurisdiction was estimated to have increased by nine per cent from 1993. The accident rate (train accidents per

million train-kilometres) was 7.6 in 1994, up from 7.1 in the previous year. Figure F.1 depicts the trend in train-kilometres, train accidents and accident rates since 1986. In accordance with TSB Regulations, the definition of transportation occurrences to be reported was changed effective August 1, 1992. When examining these rail trends, it is important to note that many of the collisions, derailments and crossing accidents reported between 1992 and 1994 would not have been reportable under the previous definition. If TSB Regulations had remained unchanged, the number of main-track derailments in 1993 and 1994 would be reduced by 16 and 25 per cent; terminal accidents by 22 and 44 per cent; and crossing accidents by 11 and nine per cent, respectively.

Figure F.1
Train Accident Rate
(Train accidents per million train-kilometres)



Source: Transportation Safety Board of Canada

The number of train accident fatalities remained virtually constant from 1993. As in previous years, the highest number of fatalities occurred in Ontario. Despite this fact, fatalities in Ontario were reduced eight per cent from 1993. All 1994

train fatalities resulted from crossing accidents, similar to the situation in 1993.

cent from 1993. The number of injuries from terminal collisions and derailments remained constant and the number of main track derailment injuries increased by only one.

Table F.2

**Number of Train Accident Fatalities and Injuries by Region:
1993 and 1994**

	1993		1994	
	Fatalities ¹	Injuries	Fatalities ¹	Injuries
Atlantic	3	4	1	1
Que.	9	11	7	9
Ont.	24	33	22	24
Man.	5	7	2	4
Sask.	3	11	7	4
Alta.	8	12	8	18
B.C.	4	6	8	4
Total	56	84	55	64

¹All fatalities in 1993 and 1994 resulted from crossing accidents.

Notes: 1993 figures are revised and 1994 are preliminary.

As of 1993 only serious injuries are included in accordance with Transportation Safety Board of Canada Regulations.

Source: Transportation Safety Board of Canada

Although the number of train accidents was up in 1994, the number of injuries resulting from these accidents declined by almost 24 per cent, from 84 in 1993 to 64 in 1994. Table F.2 depicts, by region, the number of fatalities and injuries resulting from train accidents for both years. Under new TSB Regulations, only serious injuries are reportable, thus the 1993 and 1994 figures have been adjusted to reflect this change. The number of train accident injuries decreased in every region, except for Alberta. Grade crossing injuries accounted for almost 91 per cent of the total train accident injuries. However, this number dropped by almost 27 per

Trucking Services

During 1994, the Canadian Council of Motor Transport Administrators (CCMTA) continued work on harmonizing of legislation, regulation, and administrative practices relating to drivers, vehicles, carriers and safety rules. The goal of the CCMTA is to harmonize the Canadian domestic regulations with those in the United States and Mexico, as the implementation of NAFTA progresses.

On the issue of truck safety compliance, the Alberta government, in co-operation with its trucking

industry, introduced its Partners-in-Compliance (PIC) program. Under the program, trucking companies with exemplary safety compliance records are allowed to police themselves in several regulatory areas such as fleet safety, and are exempted from road-side inspections. Their fleets will not be exempted from complying with safety regulations, however, trucking companies will be recognized for their willingness and ability to comply.

The Alberta Memorandum of Understanding (MOU) outlines how the PIC program will help identify carriers which are seriously committed to regulatory compliance in a variety of areas including mechanical fitness, safety, vehicle size and weight, and dangerous goods. The Alberta PIC program was operational as of April 1, 1995. In October 1994, the CCMTA created a task force to co-ordinate a Canada-wide "Premier Carrier" program. The CCMTA stated that results in Alberta, with its PIC program, will be used as the basis for refining the Canadian model.

Other key regulatory issues affecting the trucking industry concerned substance abuse and hours of service/fatigue for drivers. In January 1995, Transport Canada announced that it would not introduce federal substance use legislation at this time. This announcement gave the industry, i.e., the Canadian Trucking Association (CTA), the go-ahead to develop its own program for carriers that travel to the United States, so that they can comply with U.S. substance abuse regulations when they take effect on January 1, 1996.

Transport Canada offered to co-operate with the CTA and agree to help put such a program in effect.

On the question of drivers' hours of service and fatigue, the Canadian and U.S. governments decided, in 1994, to undertake extensive studies on commercial vehicle driver fatigue, loss of alertness and recovery rates. The studies, which will be complete in the summer of 1995, are being done with extensive participation by the Canadian trucking industry. As suggested by the trucking industry, the study took a careful look at the issue of the 36 hour rest and recovery period for drivers.

Marine Services

TSB statistics show that 860 marine accidents were reported in 1994, an increase of nine per cent from 1993. One factor behind the increase was more shipping accidents rather than accidents aboard ships. Increased marine activity coupled with the accompanying higher exposure to risk is seen to have contributed, in part, to the rise in the number of accidents.

Excluding fishing vessels, marine accidents were up seven per cent over 1993 but the accident rate was still lower than previous years. Even so, incidents reached a five year high of 151. Statistics on fatalities and vessels lost stayed the same while injuries actually went down by 21 per cent.

Table F.3

Marine Occurrences and Casualties (Excluding Fishing Vessels): 1990 - 1994

	1990	1991	1992	1993	1994
Accidents*	546	472	441	391	418
Incidents	124	131	149	142	151
Fatalities*	21	21	20	9	9
Injuries*	70	24	101	61	48
Vessels Lost	21	19	5	11	11

* Includes shipping accidents and accidents aboard ship.
1994 figures are preliminary and subject to change.

Source: Transportation Safety Board of Canada

GLOSSARY

Air Cargo: Total freight and express cargo carried by airlines. Cargo does not include mail or excess baggage. (See Goods.)

Aircraft Belly Hold: Refers to the underfloor cargo area of a passenger aircraft usually used for storage of passenger baggage and air cargo.

ARFAA: *Atlantic Region Freight Assistance Act.*

ASK - Available Seat Kilometre: A measurement of total passenger capacity calculated by multiplying the total number of seats available for sale by the distance travelled, as measured in kilometres.

Bilateral Air Service Agreement: An agreement or treaty between two countries permitting international air service between the two nations by air carriers designated by each nation. The agreement may include provisions for the type of aircraft used, intermediate en-route stops, aircraft safety, taxation-free fuel, and arbitration procedures.

Block Space: The sale of tickets by block to a tour operator or another airline for part of the seating capacity on aircraft flying particular scheduled routes. The buyer of blocked space generally assumes the financial risk of unsold block space tickets.

Breakbulk: Non-containerized general cargo usually assembled

in shipping units such as bags, bundles, pallets, etc.

Bulk: Cargoes that are shipped unpackaged either dry, such as grain and iron ore, or liquid, such as petroleum products. Bulk service is generally not provided on a regularly scheduled basis, but rather as needed, on specialized ships.

Business Class Fare: These fares have largely replaced the first class fare in domestic markets, offering passengers additional convenience and on-board amenities. Business fares are usually priced at about 12 to 15 per cent above the economy fare.

CAATS: Canadian Automated Air Traffic System.

Cabotage: Transport between two or more points in the same country, usually reserved for carriers of that country.

CANACAR: Trucking Association of Mexico.

Canadian Council of Motor Transport Administrators (CCMTA): A non-profit organization composed of senior representatives from the federal, provincial, and territorial departments and agencies responsible for the administration, regulation and control of motor vehicle transportation and highway safety.

Capesize Vessel: Bulk vessels, too large to use the Panama or Suez Canals, exceeding 80,000 dwt but often closer to 150,000 dwt, that must as a result navigate around South America and Africa.

Captive Shipper: A shipper that has practical access to only one transport operator for the carriage of its products. This concept is used mainly in rail and air service.

Certificate of Airworthiness: In Canada, there are two different certificates of airworthiness issued by Transport Canada: one, at the manufacturer's expense, approving the type of design of an aircraft; the other must be applied for annually by the owner of each aircraft, and involves a mechanical inspection of the aircraft by a certified mechanic, and a test flight by a specially certified pilot.

Charter Service: A service offered for transport of passengers or cargo, in which one or more charterers obtain the exclusive use of an aircraft for one or more trips.

City-Pair: A presentation of statistical data which is used to show the volumes of traffic flown between two specific cities. The two cities are those between which travel is authorized by a ticket or part of a ticket. They can represent direction, flow or origin and destination.

Class I (For Hire Trucking Carriers): Carriers which earned gross annual intercity revenues of \$ 12 million or more.

CLR - Competitive Line Rate: A shipper who is located more than 30 kilometres from a rail **interchange** may apply to the Agency to impose a freight rate on the local rail carrier for movement of the shipper's cargo from the point of loading to an **interchange** with the connecting rail carrier. To apply for a **CLR**, the shipper must first obtain a rate from the connecting carrier for transport from the **interchange** to the final destination.

Coasting Trade: Carriage of goods and passengers by water between port facilities on Canada's coastline.

Code-Sharing: The agreed use by one air carrier of the designated alpha code of another air carrier.

COFC: Container On Flat Car, a rail intermodal service.

Combi-aircraft: Refers to any commercial aircraft that is simultaneously carrying a combination of aircraft unit-load devices (U.L.D.'s) and passengers on the main deck.

Compensatory Rate: A railway rate which exceeds the variable cost of the movement of the goods.

Confidential Contract: A binding written agreement between a shipper and a carrier or carriers establishing the rates and conditions of moving goods,

which is to be kept confidential between the parties.

Conveyance: A term used in the *NTA, 1987* to refer to the transfer or lease of a railway line from one railway company to another. These transactions are subject to approval by the Agency.

Cross-trade: Foreign trade between two countries carried by ships of a third.

CRS - Computer Reservation Systems: A continuously updated computer database maintained at central data processing facilities that contains information about schedules, fares and seat availability of air and rail passenger carriers. These systems are offered by vendors, usually affiliates of air carriers, to subscribers, such as travel agents, through computer networks. A **CRS** subscriber can make reservations, assign seats and issue tickets.

CTA: Canadian Trucking Association.

Deep Discount Air Fare: Deep discount fares are those discounted by 30% or more off the full economy fares. Before 1985, deep discount fares were discounted by 25% or more off the full economy fare.

Deplaned: Traffic (passengers, mail and cargo) which lands and disembarks at an airport in Canada. It includes interline and intraline transfers, and traffic stopping over, as well as traffic terminating at an airport in Canada.

Depreciation: An amount of money charged to expense which is incurred in normal wear and tear on property and equipment (not replaced by current repair) as well as losses in serviceability occasioned by obsolescence, innovation, and changes in popular demand, or by action of public authority.

Designated area: The part of Canada north of a line defined in the *NTA, 1987* where some economic regulation of air service was retained.

Designation: A formal communication from one country to another under a **Bilateral Air Service Agreement**, advising of the selection by one government of an air carrier or carriers to operate routes allowed under the agreement.

Direct Service: Transportation service provided between two points with no enroute stops.

Discount Fare: A reduced fare usually subject to one or more travel restrictions such as requirements for advance purchase, minimum or maximum stay, non-refundability, or off-peak travel, the price of which is usually calculated as a percentage reduction from the economy fare.

Dispute Resolution: Methods of resolving disputes other than by litigation before courts, including mediation, final offer arbitration and public investigations.

Domestic: Refers to traffic beginning and terminating in the

provinces and territories of Canada.

DWT (Deadweight Tons):

Measurement of the capacity of a ship expressed as the weight in tons (2,240 lb.) of cargo, stores, fuel, passengers and crew carried by the marine vessel when loaded to maximum summer load line.

Economy Air Fare: The basic fare with no restrictions charged by an airline, which is less expensive than first class, and does not include the amenities (e.g. larger seats, complimentary bar) of the first class fare.

Electronic Data Interchange:

Refers to the electronic communication of information related to the arrangement and control of cargo transportation.

Emplaned: Traffic (passengers, mail and cargo) which embarks and takes off from an airport in Canada. It includes interline and intraline transfers, and traffic stopping over, as well as traffic originating at an airport in Canada.

Equity Swap: An exchange between corporations of a shareholding interest in each other.

Express: Cargo shipments within North America which are given priority over air freight. The rate charged includes door-to-door service on the ground as well.

Extraprovincial Trucking: Truck transport of goods from a point within a province to another point

outside the province, either within or outside Canada.

Feeder: An arrangement used by carriers to transport passengers or goods in smaller numbers or quantities from relatively low volume markets to larger points for onward carriage on higher volume transport routes. For example, a **feeder** can be a spoke in a **Hub and Spoke** distribution system.

Fitness Test: A criterion for entry into a regulated transport industry, in which an applicant for an operating licence is required to demonstrate compliance with safety and insurance standards.

Five Freedoms: Traffic rights relating to international air transportation that one country receives from the other when a bilateral air agreement is made. All five freedoms are not necessarily granted in every agreement. They are, in order: (1) to fly across another's territory without landing; (2) to land for non-traffic purposes; (3) to put down passengers, mail and cargo taken on in the territory of the State whose nationality the aircraft possesses; (4) to take on passengers, mail and cargo destined for the territory of the State whose nationality the aircraft possesses and; (5) to take on passengers, mail and cargo destined for the territory of any other contracting State and to put down passengers, mail and cargo coming from any such territory.

Fixed Cost: A cost incurred by a transportation company that remains relatively unchanged in

total regardless of the amount of service provided or traffic carried.

Fixture: Details of an agreement between parties to transport cargo by marine which include the origin, destination, cargo and applicable rates. Some are published by freight exchange agencies.

Flag of Vessel Registry: Nation state in which a vessel is registered and which holds legal jurisdiction pertaining to the operation of the ship. Ships registered in Canada, that is Canadian flagged ships, must comply with all law governing such items as labour, safety and taxation applicable in Canada. Some national registries are known as Flags of Convenience, granting advantages, particularly financial, not otherwise enjoyed under other registries.

FOA - Final Offer Arbitration: A **dispute resolution** technique in which the parties to a dispute submit confidential written offers of terms to settle the dispute to an arbitrator, who is required to choose one of the offers. The choice is final for one year unless both parties agree otherwise.

For-Hire Trucker: A truck operator offering transport services as a common carrier to any person wishing to contract with that operator, as distinct from a private carrier, or a truck operator that has contracted to offer services dedicated to a restricted number of customers.

Goods: This term includes all types of non-passenger air traffic,

i.e. freight, express, mail, and excess baggage. (See air cargo.)

Goods Tonne-Kilometre: A goods tonne-kilometre is a measurement of work performed and represents the carriage of one tonne of goods over one kilometre. Tonne-kilometre figures are obtained by multiplying the total tonnes of goods by the number of kilometres they are transported.

GRT (Gross Registered Tonnage) and GT (Gross Tonnage): Measurement of the size of a ship expressed as the total of all the enclosed spaces within a ship, expressed in tonnes, each unit of which equals 2.831 cubic metres (100 cubic feet). The term GT has replaced the term gross registered tonnage which is calculated on the same basis.

Handymax Vessel: The largest class of bulk vessel in the "handy" category, between 25,000 dwt to 45,000 dwt, used primarily in grain trades.

Handysize Vessel: Bulk vessels which are relatively small, providing flexibility and access to most world ports between 15,000 and 25,000 dwt.

Hub and Spoke: As used in the airline industry, this is a route network concept in which a central point (hub) is connected to outlying cities (spokes). Flights between outlying cities are not routed directly between those cities, but rather through the hub. The concept is also used in intermodal transport.

IFTA: International Fuel Tax Agreement.

Independent Action: The act by a member line of a conference of setting a tariff provision for a rate or service item different from the conference's existing standard tariff or service provisions.

Indirect Service: Transportation service provided between two points with one or more enroute stops. For air transportation, does not include services where passengers must change aircraft and flight numbers.

Interchange: A point where a railway line operated by one company connects to another company's trackage, and where railcars can be positioned for **interswitching**.

Interest Expenses: Interest on all classes of debt including premiums, discounts and expenses on short-term obligations; amortization of premium discounts; and expenses on short-term and long-term obligations.

Intermodal: Transportation services using two or more modes to move goods/products from a point of origin to a final destination; examples include rail container and trailer on-flat-car services.

International traffic: Refers to traffic originating or terminating in Canada destined to or originated from foreign countries. International traffic is subdivided into Transborder (to or from a point in the U.S.) and other

international (to or from points in other countries).

Interprovincial Undertaking: A physical facility, such as a pipeline, which runs between provinces, or a business which provides transport services between two or more provinces.

Interswitching: The transfer between railway companies of railcars at an **interchange**. Under the *NTA, 1987*, local railway carriers are required to offer rates to move railcars to connecting rail carriers at an **interchange** within 30 kilometres of the point of origin or destination of traffic.

Joint Service Contract: Service contract (see below) signed between a shipper and two or more conferences operating on the same trade route.

Level I Air Carriers: Since 1988, defined to include Canadian air carriers that, in each of the two calendar years immediately preceding the report year, transported at least 1,000,000 revenue passengers or at least 2,000,000 tonnes of revenue goods. The Level I carriers include Air Canada, Canadian Airlines International Ltd., AirBC and Time Air, which operates as Canadian Regional Airlines.

Level I Motor Carriers: For-hire Motor carriers with annual operating revenues of \$5 million or more.

Level II Motor Carriers: For-hire Motor carriers with annual operating revenues greater than or

equal \$1 million and less than \$5 million.

Level III Motor Carriers: For-hire Motor carriers and owner operators with annual operating revenues greater than or equal to \$25 thousand and less than \$1 million.

Liner Services: Marine transportation services provided by shipping lines according to published schedules and on specific trade routes.

LTL: Abbreviation for less than truck load, where a shipper contracts for less than the entire cargo carrying space of a truck.

Maintenance Expenses: Expenses, both direct and indirect, incurred in the repair and upkeep of property and equipment required to meet operating and safety standards.

Major Airline: In this publication, refers to Air Canada and Canadian Airlines International Ltd.

MLS: Microwave Landing System.

MVTA, 1987: *Motor Vehicle Transport Act, 1987*

Non-operating Income and Expense: Income and loss from commercial ventures not part of the transport services of the accounting entity; other revenues and expenses attributable to financing or other activities that are extraneous to and not an integral part of transportation or its incidental services; and special recurrent items of a non-periodic nature.

NVOCC: (Non-Vessel-Operating Common Carrier) a common carrier that does not operate the vessel(s) by which ocean transport is provided. NVOCCs function primarily as freight consolidators reselling space on ocean liner services.

Open Sky: The concept of deregulation of commercial air services between Canada and the U.S.

Operating Expenses: Expenses incurred in the performance of transportation. It includes direct operating expenses as well as ground and indirect operating expenses.

Operating Ratio: A standard of financial performance, being the measure of operating expenses as a percentage of operating revenue. An operating ratio of 100 means that operating expenses equal operating revenues.

Operating Revenue per Tonne-Kilometre: This ratio is calculated by dividing the operating revenues by the total tonne-kilometres flown.

Operating Revenues: Revenues from the performance of transportation and related non-transportation services. It includes: (1) transport revenue from all classes of traffic, and (2) non-transport revenue consisting of payments under the *NTA, 1987* where applicable, and the net amount of revenue less related expenses from services incidental to transportation.

Owner Operators (or lessor operators): Operators of owned or leased vehicles who haul trailers or other equipment for a trucking company or shipper.

Panamax Vessel: Vessel of dimensions allowing it to transit the Panama Canal safely, generally less than 80,000 dwt.

Partners-in-Compliance (PIC) Program: A cooperative program between the Government of Alberta and the trucking industry whereby trucking companies with exemplary safety compliance records are allowed to police themselves in several regulatory areas such as fleet safety, and are exempted from road-side inspections.

Passenger Load Factor: A measure of passenger capacity utilization derived by expressing revenue passenger-kilometres as a percentage of available seat-kilometres. (RPK/ASK)

Precarriage: In intermodal transport, the part of the carriage of goods between the shippers' premises and the first port of loading.

Public Interest Test: The test of establishing that the public interest would or would not be served by a particular occurrence or circumstances, e.g., abandonment of a railway line. The public interest is defined to include section 3 of the national transportation policy of the *NTA, 1987* and any Cabinet or Ministerial directives.

Rail Plant: The physical plant used by a railway operator, including track, bridges and tunnels, signalling systems, and yards.

RAMP: Radar Modernization Project

Return on Assets: Measure of profitability calculated by dividing net income by total assets. It shows the efficiency with which total assets are used in business operation.

Return on Investment: Measure of profitability calculated by dividing net income and interest expenses by total assets.

Revenue Tonne-Kilometre: An expression of weight (mass) multiplied by the distance from the origin to destination for each shipment.

Reverse Onus Test: The test to be met by a party objecting to the issuance of a licence (e.g., air transportation licences in northern and remote areas of Canada) on the grounds that granting the licence would be detrimental to the public interest.

Road Feeder Services: The movement of air cargo by truck in connection with, or as a substitute for international air services, excluding local area pickup and delivery.

Ro-Ro Vessels: Short form for the phrase "roll-on - roll-off" vessels which are designed to allow trucks and other vehicles to drive on motorized cargo or towed cargo and trailers of cargo.

RPK - Revenue Passenger-Kilometre: A passenger-kilometre represents the carriage of one passenger for one kilometre. Passenger-kilometre figures are obtained by multiplying the number of kilometres flown by each passenger.

Running Rights: Rights obtained by a railway, either through agreement or through application to the Agency, to operate its trains over the property of another railway.

Scheduled Service: Domestic or international air transportation service (transportation of persons, mail and cargo at a toll per unit) performed in accordance with a service schedule by an air carrier licensed by the Agency.

Seaway-size Vessel: The maximum size of vessel capable of safely transiting the locks of the St. Lawrence Seaway specified as 76 feet wide, 740 feet long and a normal draft of 8 metres. In special circumstances, vessel width of an additional two feet is permitted.

Service Contract: A formal written contract between a company and a shipping conference whereby the company commits a minimum quantity of cargo over a fixed period to the conference in exchange for a negotiated rate and/or defined service level. Service contracts must be filed with the National Transportation Agency and are confidential.

Slots: In air transport, the permission granted to air carriers

to use airspace for landing or taking off from an airport at particular times; two slots are required to operate a return flight, one for landing and one for departing.

Slot/Space Charter: Arrangement whereby a shipping line leases cargo space or container slots on another line's vessel(s) or on a dedicated liner service.

Southern and Northern Sectors: For domestic air services in Canada, the dividing line separating the southern and northern sectors is defined by the 50th parallel from the Atlantic Ocean to Ontario/Manitoba boundary, the diagonal joining the 50th parallel at the Ontario/Manitoba boundary to the 53rd parallel at the Manitoba-Saskatchewan boundary, the diagonal joining the 53rd parallel at the Manitoba-Saskatchewan boundary to the 55th parallel at the Saskatchewan/Alberta boundary and the 55th parallel from the Saskatchewan/Alberta boundary to the Pacific Ocean.

Spot Market or Tramp Market: An open market where those in need of chartering a vessel for the purposes of transporting a cargo can make short term arrangements in a timely fashion.

SS&Y Atlantic Capesize Index: Is one of several indices developed to measure the extent of change in international bulk shipping freight rate markets for capesize vessels prepared by SS&Y Research Services Ltd., a unit of Simpson, Spence and Young Shipbrokers.

States of the FSU: Nation states that were part of the former Soviet Union as republics or other geographical units.

Straight Truck: A truck whose engine, cab and load space are mounted on one chassis, as distinct from a tractor trailer rig.

TEU: Twenty foot Equivalent Unit. A unit of volume for measuring the carrying capacity of container ships or the amount of container cargo handled by ports. Although originally most shipping containers used in international ocean trade were twenty feet long, the introduction of other container lengths necessitated this common unit of measure.

Time Charter: Indicates that a charter agreement for the use of a vessel is for a period of time

TL: Abbreviation for **truckload**, where one shipper contracts for use of the entire truck cargo space.

TOFC: Abbreviation for **Trailer On Flat Car**, a rail intermodal service.

Tonne: Metric tonne (1,000 kilograms).

Tour Operators: Tour operators select destinations, identify capacity needs, negotiate agreements with hotels and suppliers of land services, and market vacation packages and single seats to the travelling public through travel agents.

Tramp Vessel: Vessels operating without a fixed itinerary or schedule or long term charter contract. Business for tramp

vessels is arranged through the **tramp market or the spot market**.

Transborder Services: Service between points in Canada and points in Alaska, Hawaii, Puerto Rico and continental U.S.

Transportation Safety Board of Canada - (TSB): An independent transportation accident investigation board, that reports to Parliament through the President of the Queen's Privy Council for Canada, whose mandate is to advance safety in the aviation, marine, pipeline and rail modes.

Trip Charter: Indicates that a charter agreement for the use of a vessel is on a trip basis

Turbo Prop: Turbine-powered aircraft.

Variable Cost: A cost incurred by a transportation company that varies directly with the amount of service provided and traffic carried; includes items such as crew costs and fuel expenses.

Vertical Integration: The extension of activity by an organization into businesses directly related to the production or distribution of the organization's end products.

Vessel Sharing: Arrangement between two or more shipping lines whereby one or more of these lines' vessels is used to carry cargo from all lines party to the agreement.

Vessel Transit: The passing through of one of the sections of locks and channels on the

St. Lawrence Seaway, either loaded or ballast. The Montreal - Lake Ontario Section and the Welland Canal represent the two sections of the Seaway. A vessel passing through both sections represents two vessel transits.

WGTA: *Western Grain Transportation Act.*

Yield: A measurement of business financial performance. For airline operators, yield generally is the average revenue per **revenue passenger kilometre** or **revenue tonne kilometre**.



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